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NEWS 6	Apr 22	Records from IP.com available in CAPLUS, HCAPLUS, and ZCAPLUS
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NEWS 8	Apr 22	Federal Research in Progress (FEDRIP) now available
NEWS 9	Jun 03	New e-mail delivery for search results now available
NEWS 10	Jun 10	MEDLINE Reload
NEWS 11	Jun 10	PCTFULL has been reloaded
NEWS 12	Jul 02	FOREGE no longer contains STANDARDS file segment
NEWS 13	Jul 22	USAN to be reloaded July 28, 2002; saved answer sets no longer valid
NEWS 14	Jul 29	Enhanced polymer searching in REGISTRY
NEWS 15	Jul 30	NETFIRST to be removed from STN
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NEWS 17	Aug 08	PHARMAMarketLetter(PHARMAML) - new on STN
NEWS 18	Aug 08	NTIS has been reloaded and enhanced
NEWS 19	Aug 09	JAPIO to be reloaded August 25, 2002
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NEWS 23	Aug 26	Sequence searching in REGISTRY enhanced

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=> s smad (s) transcription (s) CBP

L1 67 SMAD (S) TRANSCRIPTION (S) CBP

=> s smad (s) transcription (s) p300

L2 106 SMAD (S) TRANSCRIPTION (S) P300

=> s l1 or l2

L3 118 L1 OR L2

=> dup rem l3

PROCESSING COMPLETED FOR L3
L4 47 DUP REM L3 (71 DUPLICATES REMOVED)

=> s l4 and smad3

L5 24 L4 AND SMAD3

=> dup rem l5

PROCESSING COMPLETED FOR L5
L6 24 DUP REM L5 (0 DUPLICATES REMOVED)

=> d l6 total ibib kwic

L6 ANSWER 1 OF 24 MEDLINE
ACCESSION NUMBER: 2002406906 IN-PROCESS
DOCUMENT NUMBER: 22151107 PubMed ID: 12034730
TITLE: c-Jun Associates with the Oncoprotein Ski and Suppresses Smad2 Transcriptional Activity.
AUTHOR: Pessah Marcia; Marais Jacqueline; Prunier Celine; Ferrand Nathalie; Lallemand Francois; Mauviel Alain; Atfi Azeddine
CORPORATE SOURCE: INSERM U 482, Hopital Saint-Antoine, 184 Rue du Faubourg Saint-Antoine, 75571, Paris Cedex 12 and INSERM U532, Hopital Saint-Louis, 1 avenue Claude Vellefaux, 75010,

Paris, France.
SOURCE: JOURNAL OF BIOLOGICAL CHEMISTR[redacted] (2002 Aug 9) 277 (32) 29094-100.
Journal code: 2985121R. ISSN: 0021-9258.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: IN-PROCESS; NONINDEXED; Priority Journals
ENTRY DATE: Entered STN: 20020806
Last Updated on STN: 20020806

AB The **Smad** proteins are key intracellular effectors of transforming growth factor-beta (TGF-beta) cytokines. The ability of **Smads** to modulate **transcription** results from a functional cooperativity with the coactivators **p300** /cAMP-response element-binding protein-binding protein (**CBP**), or the corepressors TGIF and Ski. The c-Jun N-terminal kinase (JNK) pathway, another downstream target activated by TGF-beta receptors, has also been suggested to inhibit TGF-beta signaling through interaction of c-Jun with Smad2 and **Smad3**. Here we show that c-Jun directly interacts with Ski to enhance the association of Ski with Smad2 in the basal. . .

L6 ANSWER 2 OF 24 MEDLINE
ACCESSION NUMBER: 2002061871 MEDLINE
DOCUMENT NUMBER: 21634901 PubMed ID: 11689553
TITLE: c-myc is a downstream target of the Smad pathway.
AUTHOR: Yagi Ken; Furuhashi Masao; Aoki Hiromasa; Goto Daisuke; Kuwano Hiroyuki; Sugamura Kazuo; Miyazono Kohei; Kato Mitsuyasu
CORPORATE SOURCE: Department of Biochemistry, The Cancer Institute of the Japanese Foundation for Cancer Research and Research for the Future Program, Japan Society for the Promotion of Science, 1-37-1 Kami-ikebukuro, Toshima-ku, Tokyo 170-8455, Japan.
SOURCE: JOURNAL OF BIOLOGICAL CHEMISTRY, (2002 Jan 4) 277 (1) 854-61.
Journal code: 2985121R. ISSN: 0021-9258.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 200201
ENTRY DATE: Entered STN: 20020125
Last Updated on STN: 20020128
Entered Medline: 20020124

AB . . . event for growth inhibition induced by transforming growth factor-beta (TGF-beta) and is frequently impaired in cancer cells. We determined a **Smad**-responsive element in the c-myc promoter. This element is a complex of the TGF-beta1 inhibitory element (TIE) originally identified in the transin/stromelysin promoter and an E2F site responsible for transcriptional activation of the c-myc promoter. **Smad3** and E2F-4 directly bound to the element (TIE/E2F), and substitution of two nucleotides in TIE/E2F impaired binding of both **Smad3** and E2F-4 as well as serum-induced activation and TGF-beta-induced suppression of the c-myc promoter activity. **Smads** bound TIE/E2F within 1 h after stimulation with TGF-beta, before the suppression of c-myc **transcription**, whereas binding of p130 to TIE/E2F became augmented later than 12 h. TGF-beta signaling did not compete with E2F-4 for binding to TIE/E2F, but reduced **p300** co-immunoprecipitating with E2F-4. Therefore, TGF-beta signaling may suppress c-myc promoter activity by dissociating **p300** from E2F-4.

CN 0 (DNA-Binding Proteins); 0 (E1A-associated p300 protein); 0 (Nuclear Proteins); 0 (Retinoblastoma Protein); 0 (Smad2 protein); 0 (**Smad3** protein); 0 (Trans-Activators); 0 (Transcription Factors); 0 (Transforming

Growth Factor beta); 0 (transcription factor E2F)

L6 ANSWER 3 OF 24 MEDLINE
ACCESSION NUMBER: 2002287191 MEDLINE
DOCUMENT NUMBER: 22020602 PubMed ID: 12023901
TITLE: Repression of Smad2 and **Smad3** transactivating activity by association with a novel splice variant of CCAAT-binding factor C subunit.
AUTHOR: Chen Feifei; Ogawa Kenji; Liu Xubao; Stringfield Teresa M; Chen Yan
CORPORATE SOURCE: Department of Medical and Molecular Genetics and the Walther Oncology Center, Indiana University School of Medicine, and the Walther Cancer Institute, Indianapolis, IN 46202, USA.
CONTRACT NUMBER: R01 DK55991 (NIDDK)
SOURCE: BIOCHEMICAL JOURNAL, (2002 Jun 1) 364 (Pt 2) 571-7. Journal code: 2984726R. ISSN: 0264-6021.
PUB. COUNTRY: England: United Kingdom
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 200207
ENTRY DATE: Entered STN: 20020528
Last Updated on STN: 20020716
Entered Medline: 20020715

TI Repression of Smad2 and **Smad3** transactivating activity by association with a novel splice variant of CCAAT-binding factor C subunit.

AB Activation by transforming growth factor-beta (TGF-beta)/activin receptors leads to phosphorylation of Smad2 (Sma- and Mad-related protein 2) and **Smad3**, which function as **transcription** factors to regulate gene expression. Using the MH2 domain (Mad homologue domain of **Smad** proteins 2) of **Smad3** in a yeast two-hybrid screening, we isolated a novel splice variant of CAATT-binding factor subunit C (CBF-C), designated CBF-Cb, that associated with **Smad3** . CBF-C is one of the subunits that form a heterotrimeric CBF complex capable of binding and activating the CAATT motif. . . ubiquitously in various mouse tissues. By an immunoprecipitation assay, we detected an in vivo association of CBF-Cb with Smad2 and **Smad3**, independent of signalling by activated TGF-beta type I receptors. In transient transfection experiments, overexpression of CBF-Cb was able to repress the transactivating activity of Smad2 and **Smad3**, mediated either by direct binding to the **Smad**-responsive element or through their association with the **Smad**-interacting **transcription** factor FAST-2 (forkhead activin signal transducer-2). The **Smad** -mediated transcriptional response after TGF-beta receptor activation was also inhibited by overexpression of unspliced CBF-C. In addition, the repressive activity of CBF-Cb on Smad2- and **Smad3**-mediated transcriptional regulation was abrogated by co-expression of the general **transcription** activator **p300**. The association of CBF-Cb with Smad2 was competitively inhibited by overexpression of **p300** . These data indicate a novel mechanism for modulation of the transcriptional activity of **Smad** proteins, whereby the interaction of CBF-Cb, as well as canonical CBF-C, with the MH2 domain of **Smads** may prevent the association of **Smads** with transcriptional co-activators.

CN 0 (CCAAT-Binding Factor); 0 (DNA Primers); 0 (DNA-Binding Proteins); 0 (Smad2 protein); 0 (**Smad3** protein); 0 (Trans-Activators)

L6 ANSWER 4 OF 24 MEDLINE
ACCESSION NUMBER: 2001553857 MEDLINE
DOCUMENT NUMBER: 21486478 PubMed ID: 11502752
TITLE: Transforming growth factor-beta repression of matrix metalloproteinase-1 in dermal fibroblasts involves

Smad3.
AUTHOR: Yuan W; Varga J
CORPORATE SOURCE: Section of Rheumatology, College of Medicine, University of
Illinois, Chicago, Illinois 60607-7171, USA.
CONTRACT NUMBER: AR-42309 (NIAMS)
SOURCE: JOURNAL OF BIOLOGICAL CHEMISTRY, (2001 Oct 19) 276 (42) 38502-10.
Journal code: 2985121R. ISSN: 0021-9258.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 200112
ENTRY DATE: Entered STN: 20011016
Last Updated on STN: 20020122
Entered Medline: 20011204

TI Transforming growth factor-beta repression of matrix metalloproteinase-1 in dermal fibroblasts involves **Smad3**.

AB . . . gene expression in fibroblasts. In these studies, we examined the hypothesis that repression of MMP-1 may be mediated through the **Smad** signaling pathway. The results showed that **Smad3** and Smad4, but not Smad1 or Smad2, mimicked the inhibitory effect of TGF-beta and abrogated interleukin-1beta (IL-1beta)-induced stimulation of MMP-1 promoter activity and NFkappaB-specific gene **transcription** in dermal fibroblasts. Experiments with truncation mutants indicated that both MH1 and MH2 domains of **Smad3** were necessary for inhibitory activity. Dominant negative mutants of **Smad3** or Smad4 and antagonistic Smad7, which disrupts ligand-induced **Smad3** phosphorylation, abrogated the repression of MMP-1 **transcription** by TGF-beta. Similar results were obtained using immunoblot and Northern analysis. Furthermore, TGF-beta failed to repress MMP-1 promoter activity in **Smad3**-deficient murine embryonic fibroblasts. These results implicated cellular **Smads** in mediating the inhibitory effects of TGF-beta. Overexpression of the transcriptional co-activator **p300**, but not its histone acetyltransferase (HAT)-deficient mutant, was able to relieve repression of MMP-1 gene expression, suggesting that **Smad**-dependent inhibition may be due to increased competition between **Smad** proteins and IL-1beta signaling pathways for limiting amounts of cellular **p300**. Together, these results demonstrate that MMP-1 is a target for negative regulation by TGF-beta through cellular **Smad3** and Smad4. **Smad**-mediated repression of MMP-1 gene expression may be important for preventing excessive matrix degradation induced by inflammatory cytokines; disruption of **Smad** signaling, as occurs in certain cancer cells, may thus be causally linked to uncontrolled tissue destruction mediated through MMP-1.

CN. . . p300 protein); 0 (Genetic Vectors); 0 (NF-kappa B); 0 (Nuclear Proteins); 0 (Plasmids); 0 (Smad1 protein); 0 (Smad2 protein); 0 (**Smad3** protein); 0 (Smad4 protein); 0 (Trans-Activators); 0 (Transforming Growth Factor beta); EC 3.4.24.7 (Interstitial Collagenase)

L6 ANSWER 5 OF 24 MEDLINE
ACCESSION NUMBER: 2001376682 MEDLINE
DOCUMENT NUMBER: 21326121 PubMed ID: 11331273
TITLE: Smad proteins suppress CCAAT/enhancer-binding protein (C/EBP) beta- and STAT3-mediated transcriptional activation of the haptoglobin promoter.
AUTHOR: Zauberman A; Lapter S; Zipori D
CORPORATE SOURCE: Department of Molecular Cell Biology, The Weizmann Institute of Science, Rehovot 76100, Israel.
SOURCE: JOURNAL OF BIOLOGICAL CHEMISTRY, (2001 Jul 6) 276 (27)

24719-25.
Journal code: 2985121R. ISSN: 1-9258.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 200108
ENTRY DATE: Entered STN: 20010813
Last Updated on STN: 20010813
Entered Medline: 20010809

AB . . . acute phase protein haptoglobin by hepatoma cells. Overexpression of the C/EBPbeta gene, a downstream effector in the IL-6 pathway, activated **transcription** from the haptoglobin promoter. This was abolished by either a constitutively active form of activin A type IB receptor (CAactRIB) or by a combination of **Smad3** and Smad4. Similarly, **Smads** abolished transcriptional activation by co-stimulation with IL-6 and STAT3. The **transcription** co-activator **p300** partially overcame the suppressive effect of **Smads**. Electrophoretic mobility shift assays indicated that C/EBPbeta binding to haptoglobin promoter DNA was reduced by over-expression of CAactRIB and Smad4. We thus show that **Smad** proteins operate as **transcription** inhibitors on target genes of the IL-6 induced pathway. The effect of **Smads** is exerted on components of the **transcription** activation complex and may also involve interference with DNA binding. This study thus depicts molecular sites of interaction between the. . .

CN 0 (CCAAT-Enhancer-Binding Proteins); 0 (DNA-Binding Proteins); 0 (Haptoglobins); 0 (Interleukin-6); 0 (Receptors, Interleukin-6); 0 (**Smad3** protein); 0 (Smad4 protein); 0 (Stat3 protein); 0 (Trans-Activators)

L6 ANSWER 6 OF 24 MEDLINE
ACCESSION NUMBER: 2001363980 MEDLINE
DOCUMENT NUMBER: 21303674 PubMed ID: 11306568
TITLE: An essential role for Mad homology domain 1 in the association of **Smad3** with histone deacetylase activity*.
AUTHOR: Liberati N T; Moniwa M; Borton A J; Davie J R; Wang X F
CORPORATE SOURCE: Department of Pharmacology and Cancer Biology, Duke University Medical Center, Durham, North Carolina, 27708, USA.
CONTRACT NUMBER: CA75368 (NCI)
SOURCE: JOURNAL OF BIOLOGICAL CHEMISTRY, (2001 Jun 22) 276 (25) 22595-603.
Journal code: 2985121R. ISSN: 0021-9258.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 200107
ENTRY DATE: Entered STN: 20010723
Last Updated on STN: 20010723
Entered Medline: 20010719

TI An essential role for Mad homology domain 1 in the association of **Smad3** with histone deacetylase activity*.

AB The **Smads** are a family of sequence-specific DNA-binding proteins that modulate **transcription** in response to transforming growth factor beta (TGFbeta) by recruiting transcriptional activators like the histone acetyltransferase, **p300/CBP**, or repressors like the histone deacetylase, HDAC1, to TGFbeta target genes. The association of **Smads** and HDAC1 is mediated in part by direct binding of **Smads** to the HDAC1-associated proteins, TG-interacting factor, c-ski, and SnoN. Although ectopic expression of these proteins inhibits **Smad**-activated **transcription**, the contribution of histone deacetylase enzymatic activity to

transcriptional repression by TGFbeta is unknown. Here, the biological requirements for the interaction between **Smad** and endogenous histone deacetylase activity are investigated. We identify residues in Mad homology domain 1 of **Smad3** that are required for association with histone deacetylase activity. An amino acid change at one of these critical residues does not disrupt the association of **Smad3** with c-ski, SnoN, and transforming growth-interacting factor but does abrogate the ability of **Smad3** to repress **transcription**. These findings indicate that the association of **Smad3** and histone deacetylase activity relies on additional protein mediators that make contact with **Smad3** at its amino terminus. Moreover, these data suggest that the suppressive effect of **Smad3** on **transcription** is dependent upon its association with histone deacetylase enzymatic activity.

CN 0 (DNA Primers); 0 (DNA-Binding Proteins); 0 (Repressor Proteins); 0 (**Smad3** protein); 0 (Trans-Activators); 0 (Transforming Growth Factor beta); EC 3.5.1.- (Histone Deacetylase)

L6 ANSWER 7 OF 24 MEDLINE

ACCESSION NUMBER: 2001286992 MEDLINE
DOCUMENT NUMBER: 21179153 PubMed ID: 11134049
TITLE: Antagonistic regulation of type I collagen gene expression by interferon-gamma and transforming growth factor-beta. Integration at the level of p300/CBP transcriptional coactivators.
AUTHOR: Ghosh A K; Yuan W; Mori Y; Chen Sj; Varga J
CORPORATE SOURCE: Section of Rheumatology, University of Illinois at Chicago College of Medicine, Chicago, Illinois 60607.
CONTRACT NUMBER: AR42309 (NIAMS)
AR46390 (NIAMS)
SOURCE: JOURNAL OF BIOLOGICAL CHEMISTRY, (2001 Apr 6) 276 (14) 11041-8.
Journal code: 2985121R. ISSN: 0021-9258.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 200105
ENTRY DATE: Entered STN: 20010529
Last Updated on STN: 20010529
Entered Medline: 20010524

AB . . . have shown previously that in normal skin fibroblasts, TGF-beta positively regulates alpha2(I) procollagen gene (COL1A2) promoter activity through the cellular **Smad** signal transduction pathway. In contrast, IFN-gamma activates Stat1alpha, down-regulates COL1A2 **transcription**, and abrogates its stimulation induced by TGF-beta. The level of integration of the two pathways mediating antagonistic collagen regulation is unknown. We now report that IFN-gamma abrogates TGF-beta-stimulated COL1A2 **transcription** in fibroblasts by inhibiting **Smad** activities. IFN-gamma appears to induce competition between activated Stat1alpha and **Smad3** for interaction with limiting amounts of cellular **p300/CBP**. Overexpression of **p300** restored COL1A2 stimulation by TGF-beta in the presence of IFN-gamma, and potentiated IFN-gamma-dependent positive transcriptional responses. In contrast to fibroblasts, in U4A cells lacking Jak1 and consequently unable to activate Stat1alpha-mediated responses, IFN-gamma failed to repress TGF-beta-induced **transcription**. These results indicate that as essential coactivators for both **Smad3** and Stat1alpha, nuclear **p300/CBP** integrate signals that positively or negatively regulate COL1A2 **transcription**. The findings implicate a novel mechanism to account for antagonistic interaction of **Smad** and Jak-Stat pathways in regulation of target genes. In fibroblasts responding to

cytokines with opposing effects on collagen **transcription**, the relative levels of cellular coactivators, and their interaction with regulated **transcription** factors, may govern the net effect.

L6 ANSWER 8 OF 24 MEDLINE
ACCESSION NUMBER: 2001286933 MEDLINE
DOCUMENT NUMBER: 21179094 PubMed ID: 11152469
TITLE: CTGF and SMADs, maintenance of scleroderma phenotype is independent of SMAD signaling.
AUTHOR: Holmes A; Abraham D J; Sa S; Shiwen X; Black C M; Leask A
CORPORATE SOURCE: Center for Rheumatology, Royal Free and University College Medical School, Rowland Hill Street, London NW3 2PF, United Kingdom.
CONTRACT NUMBER: AR45879 (NIAMS)
SOURCE: JOURNAL OF BIOLOGICAL CHEMISTRY, (2001 Apr 6) 276 (14) 10594-601.
Journal code: 2985121R. ISSN: 0021-9258.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 200105
ENTRY DATE: Entered STN: 20010529
Last Updated on STN: 20010529
Entered Medline: 20010524

AB . . . fibroblasts cultured from fibrotic tissues express high basal levels of CTGF, even in the absence of added TGFbeta. Induction of **transcription** by TGFbeta requires the action of **SMAD** proteins. In this report we have investigated the role of **SMADs** in the TGFbeta-induction of CTGF in normal fibroblasts and in the elevated levels of CTGF expression found in dermal fibroblasts. . . patients with scleroderma, a progressive fibrotic disorder that can affect all organs of the body. We have identified a functional **SMAD** binding site in the CTGF promoter. TGFbeta-induction of CTGF is dependent on **SMAD3** and SMAD4 but not SMAD2 and is **p300**-independent. However, mutation of the **SMAD** binding site does not reduce the high level of CTGF promoter activity observed in dermal fibroblasts cultured from lesional areas. . . the maintenance of the fibrotic phenotype in scleroderma fibroblasts, as visualized by excess CTGF expression, appears to be independent of **SMAD**-dependent TGFbeta signaling. Furthermore, given CTGF's activities, the high level of CTGF expression observed in scleroderma lesions may contribute to the. . .

L6 ANSWER 9 OF 24 MEDLINE
ACCESSION NUMBER: 2001228179 MEDLINE
DOCUMENT NUMBER: 21164814 PubMed ID: 11264182
TITLE: Human T-cell leukemia virus type I oncoprotein Tax represses Smad-dependent transforming growth factor beta signaling through interaction with CREB-binding protein/p300.
AUTHOR: Mori N; Morishita M; Tsukazaki T; Giam C Z; Kumatori A; Tanaka Y; Yamamoto N
CORPORATE SOURCE: Department of Preventive Medicine and AIDS Research, Nagasaki University, Japan.. n-mori@net.nagasaki-u.ac.jp
SOURCE: BLOOD, (2001 Apr 1) 97 (7) 2137-44.
Journal code: 7603509. ISSN: 0006-4971.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Abridged Index Medicus Journals; Priority Journals
ENTRY MONTH: 200104
ENTRY DATE: Entered STN: 20010502
Last Updated on STN: 20010502
Entered Medline: 20010426

AB . . . found to be resistant to growth inhibition by transforming growth factor (TGF)-beta. Here it is shown that Tax can perturb **Smad**-dependent TGF-beta signaling even though no direct interaction of Tax and **Smad** proteins could be detected. Importantly, a mutant Tax of CREB-binding protein (**CBP**)/**p300** binding site, could not repress the **Smad** transactivation function, suggesting that the **CBP/p300** binding domain of Tax is essential for the suppression of **Smad** function. Because both Tax and **Smad** are known to interact with **CBP/p300** for the potentiation of their transcriptional activities, the effect of **CBP/p300** on suppression of **Smad**-mediated transactivation by Tax was examined. Overexpression of **CBP/p300** reversed Tax-mediated inhibition of **Smad** transactivation. Furthermore, **Smad** could repress Tax transcriptional activation, indicating reciprocal repression between Tax and **Smad**. These results suggest that Tax interferes with the recruitment of **CBP/p300** into **transcription** initiation complexes on TGF-beta-responsive elements through its binding to **CBP/p300**. The novel function of Tax as a repressor of TGF-beta signaling may contribute to HTLV-I leukemogenesis. (Blood. 2001;97:2137-2144)

CN . . . 0 (Macromolecular Systems); 0 (Nuclear Proteins); 0 (Receptors, Transforming Growth Factor beta); 0 (Recombinant Fusion Proteins); 0 (Smad2 protein); 0 (**Smad3** protein); 0 (Smad4 protein); 0 (Trans-Activators); 0 (Transforming Growth Factor beta); EC 2.7.1.- (Protein-Serine-Threonine Kinases); EC 2.7.1.- (TGF-beta type I. . .

L6 ANSWER 10 OF 24 MEDLINE

ACCESSION NUMBER: 2001275787 MEDLINE
DOCUMENT NUMBER: 21260031 PubMed ID: 11359933
TITLE: Ligand-dependent degradation of **Smad3** by a ubiquitin ligase complex of ROC1 and associated proteins.
AUTHOR: Fukuchi M; Imamura T; Chiba T; Ebisawa T; Kawabata M; Tanaka K; Miyazono K
CORPORATE SOURCE: Department of Biochemistry, the Cancer Institute of Japanese Foundation for Cancer Research, and Research for the Future Program, the Japan Society for the Promotion of Science, 1-37-1 Kami-ikebukuro, Toshima-ku, Tokyo 170-8455, Japan.
SOURCE: MOLECULAR BIOLOGY OF THE CELL, (2001 May) 12 (5) 1431-43.
Journal code: 9201390. ISSN: 1059-1524.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 200109
ENTRY DATE: Entered STN: 20010917
Last Updated on STN: 20020420
Entered Medline: 20010913

TI Ligand-dependent degradation of **Smad3** by a ubiquitin ligase complex of ROC1 and associated proteins.

AB **Smads** are signal mediators for the members of the transforming growth factor-beta (TGF-beta) superfamily. Upon phosphorylation by the TGF-beta receptors, **Smad3** translocates into the nucleus, recruits transcriptional coactivators and corepressors, and regulates **transcription** of target genes. Here, we show that **Smad3** activated by TGF-beta is degraded by the ubiquitin-proteasome pathway. **Smad3** interacts with a RING finger protein, ROC1, through its C-terminal MH2 domain in a ligand-dependent manner. An E3 ubiquitin ligase complex ROC1-SCF(Fbw1a) consisting of ROC1, Skp1, Cullin1, and Fbw1a (also

termed betaTrCP1) induces ubiquitination of **Smad3**. Recruitment of a transcr[redacted]ional coactivator, **p300**, to nu[redacted]ar **Smad3** facilitates the interaction with the E3 ligase complex and triggers the degradation process of **Smad3**. **Smad3** bound to ROC1-SCF(Fbw1a) is then exported from the nucleus to the cytoplasm for proteasomal degradation. TGF-beta/**Smad3** signaling is thus irreversibly terminated by the ubiquitin-proteasome pathway.

CN 0 (DNA-Binding Proteins); 0 (Ligands); 0 (Macromolecular Systems); 0 (Multienzyme Complexes); 0 (Recombinant Fusion Proteins); 0 (**Smad3** protein); 0 (Trans-Activators); 0 (Transforming Growth Factor beta); EC 3.4.22 (Cysteine Endopeptidases); EC 3.4.99.46 (multicatalytic endopeptidase complex); EC 6. (Ligases);. . .

L6 ANSWER 11 OF 24 MEDLINE
ACCESSION NUMBER: 2001015490 MEDLINE
DOCUMENT NUMBER: 20459088 PubMed ID: 10903323
TITLE: Tumor necrosis factor-alpha inhibits transforming growth factor-beta /Smad signaling in human dermal fibroblasts via AP-1 activation.
AUTHOR: Verrecchia F; Pessah M; Atfi A; Mauviel A
CORPORATE SOURCE: INSERM U532, Hopital Saint-Louis, 75010 Paris and INSERM U482, Hopital Saint-Antoine, 75012 Paris, France.
SOURCE: JOURNAL OF BIOLOGICAL CHEMISTRY, (2000 Sep 29) 275 (39) 30226-31.
Journal code: 2985121R. ISSN: 0021-9258.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 200010
ENTRY DATE: Entered STN: 20010322
Last Updated on STN: 20020420
Entered Medline: 20001027

AB . . . is of utmost importance given the physiopathological implications of these cytokines. In this report, we demonstrate that TNF-alpha prevents TGF-beta-induced **Smad**-specific gene transactivation without inducing detectable levels of inhibitory Smad7 in human dermal fibroblasts. On the other hand, c-Jun and JunB, both induced by TNF-alpha, block **Smad3**-mediated **transcription**. Expression of antisense c-Jun mRNA prevents TNF-alpha inhibition of TGF-beta/**Smad** signaling whereas that of dominant-negative Ikappa-B kinase-alpha or antisense Smad7 does not. We provide evidence for off-DNA interactions between **Smad3** and both c-Jun and JunB accompanied with reduced **Smad3**-DNA interactions. Finally, we show that overexpression of the transcriptional co-activator **p300** prevents TNF-alpha/AP-1 inhibition of TGF-beta/**Smad** signaling. These data suggest that TNF-alpha interferes with **Smad** signaling through the induction of AP-1 components, the latter forming off-DNA complexes with **Smad3** and preventing its binding to specific cis-element(s). In addition, Jun members compete with **Smad3** for the common **transcription** co-activator **p300**. These two mechanisms are likely to act in concert to decrease **Smad**-specific **transcription**.

CN 0 (DNA-Binding Proteins); 0 (E1A-associated p300 protein); 0 (Nuclear Proteins); 0 (Proto-Oncogene Proteins c-jun); 0 (RNA, Antisense); 0 (**Smad3** protein); 0 (Smad7 protein); 0 (Trans-Activators); 0 (Transcription Factor AP-1); 0 (Transforming Growth Factor beta); 0 (Tumor Necrosis Factor); EC. . .

L6 ANSWER 12 OF 24 CAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 2000:897036 CAPLUS

DOCUMENT NUMBER: 134:51915
TITLE: The transcriptional co-activator P/CAF potentiates TGF-.beta./smad signaling
AUTHOR(S): Itoh, Susumu; Ericsson, Johan; Nishikawa, Jun-Ichi; Heldin, Carl-Henrik; Ten Dijke, Peter
CORPORATE SOURCE: Division of Cellular Biochemistry, The Netherlands Cancer Institute, Amsterdam, 1066 CX, Neth.
SOURCE: Nucleic Acids Research (2000), 28(21), 4291-4298
CODEN: NARHAD; ISSN: 0305-1048
PUBLISHER: Oxford University Press
DOCUMENT TYPE: Journal
LANGUAGE: English
REFERENCE COUNT: 53 THERE ARE 53 CITED REFERENCES AVAILABLE FOR THIS
RECORD. ALL CITATIONS AVAILABLE IN THE RE
FORMAT

AB Smads perform pivotal functions in the intracellular signaling of transforming growth factor-.beta. (TGF-.beta.). TGF-.beta.-mediated activation of TGF-.beta. type I receptor stimulates the phosphorylation of Smad2 and **Smad3** and subsequent heteromeric complex formation with Smad4. The heteromeric Smad complexes translocate into the nucleus where they, in cooperation with coactivators and corepressors, regulate transcriptional responses. Here we investigated the possible coactivator function of P/CAF in TGF-.beta./ Smad signaling. P/CAF was found to interact directly with **Smad3** in vitro. Moreover, Smad2 and **Smad3** interacted with P/CAF upon TGF-.beta. type I receptor activation in cultured mammalian cells. The interaction involves the MH2 domain of **Smad3** and the N-terminal region of P/CAF. P/CAF potentiated the transcriptional activity of heterologous Gal4-Smad2 and Gal4-**Smad3** fusion proteins. In addn., P/CAF potentiated the TGF-.beta./**Smad3**-induced transcriptional responses, which could be further enhanced by coactivators p300 and Smad4. P/CAF may, therefore, activate Smad-mediated transcriptional responses independently or in cooperation with p300/CBP. Our results indicate a direct phys. and functional interplay between two neg. regulators of cell proliferation, **Smad3** and P/CAF.

IT **Transcription** factors
RL: BAC (Biological activity or effector, except adverse); BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
(P/CAF (**p300/CBP**-assocd. factor); transcriptional coactivator P/CAF potentiation of TGF-.beta./**Smad** signaling and mechanisms therein)

IT Transcription factors
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
(**Smad3**; transcriptional coactivator P/CAF potentiation of TGF-.beta./Smad signaling and mechanisms therein)

IT **Transcription** factors
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
(**p300**; transcriptional coactivator P/CAF potentiation of TGF-.beta./**Smad** signaling and mechanisms therein)

L6 ANSWER 13 OF 24 MEDLINE
ACCESSION NUMBER: 2000406732 MEDLINE
DOCUMENT NUMBER: 20379360 PubMed ID: 10918613
TITLE: Smad-dependent stimulation of type I collagen gene expression in human skin fibroblasts by TGF-beta involves functional cooperation with p300/CBP transcriptional coactivators.
AUTHOR: Ghosh A K; Yuan W; Mori Y; Varga J
CORPORATE SOURCE: Section of Rheumatology, University of Illinois at Chicago

College of Medicine, Chicago, Illinois 60607, USA.
CONTRACT NUMBER: AR-42309 (NIAMS)
AR-46390 (NIAMS)
SOURCE: ONCOGENE, (2000 Jul 20) 19 (31) 3546-55.
Journal code: 8711562. ISSN: 0950-9232.
PUB. COUNTRY: ENGLAND: United Kingdom
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 200008
ENTRY DATE: Entered STN: 20000901
Last Updated on STN: 20000901
Entered Medline: 20000824

AB Transforming growth factor-beta (TGF-beta) stimulation of Type I collagen gene (COL1A2) **transcription** involves the **Smad** signal transduction pathway, but the mechanisms of **Smad**-mediated transcriptional activation are not fully understood. We now demonstrate that the ubiquitous transcriptional coactivators **p300** and CREB-binding protein (**CBP**) enhanced basal as well as TGF-beta- or **Smad3**-induced COL1A2 promoter activity, and stimulated the expression of endogenous Type I collagen. The adenoviral E1A oncoprotein abrogated stimulation of COL1A2. . . . and reduced the basal level of collagen gene expression. This effect was due to specific interaction of E1A with cellular **p300/CBP** because (a) a mutant form of E1A defective in **p300** binding failed to abrogate stimulation, and (b) forced expression of **p300/CBP** restored the ability of TGF-beta to stimulate COL1A2 promoter activity in the presence of E1A. The effect of **p300** on COL1A2 **transcription** appeared to be due, in part, to its intrinsic acetyltransferase activity, as stimulation induced by a histone acetyltransferase-deficient mutant **p300** was substantially reduced. Transactivation of COL1A2 by **p300** involved the **Smad** signaling pathway, as Smad4-deficient cells failed to respond to **p300**, and stimulation was rescued by overexpression of Smad4. Furthermore, minimal constructs containing only the **Smad**-binding CAGACA element of COL1A2 were transactivated by **p300** in the presence of TGF-beta. These results indicate, for the first time, that the multifunctional **p300/CBP** coactivators play a major role in **Smad** -dependent TGF-beta stimulation of collagen gene expression in fibroblasts. Oncogene (2000) 19, 3546 - 3555

CN 0 (Adenovirus E1A Proteins); 0 (DNA-Binding Proteins); 0 (E1A-associated p300 protein); 0 (Nuclear Proteins); 0 (Recombinant Fusion Proteins); 0 (**Smad3** protein); 0 (Smad4 protein); 0 (Trans-Activators); 0 (Transforming Growth Factor beta)

L6 ANSWER 14 OF 24 MEDLINE
ACCESSION NUMBER: 2000459104 MEDLINE
DOCUMENT NUMBER: 20432257 PubMed ID: 10974035
TITLE: Inhibition of E-selectin gene expression by transforming growth factor beta in endothelial cells involves coactivator integration of Smad and nuclear factor kappaB-mediated signals.
AUTHOR: DiChiara M R; Kiely J M; Gimbrone M A Jr; Lee M E; Perrella M A; Topper J N
CORPORATE SOURCE: Cardiovascular Division, Department of Medicine, Stanford University School of Medicine, Stanford, California 94305, USA.
CONTRACT NUMBER: P01-HL36028 (NHLBI)
RO1-HL62823-01 (NHLBI)
SOURCE: JOURNAL OF EXPERIMENTAL MEDICINE, (2000 Sep 4) 192 (5) 695-704.
Journal code: 2985109R. ISSN: 0022-1007.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English

FILE SEGMENT: Priority Journals
ENTRY MONTH: 200009
ENTRY DATE: Entered STN: 20001005
Last Updated on STN: 20001005
Entered Medline: 20000928

AB . . . vascular endothelium exposed to inflammatory stimuli both in vitro and in vivo. This inhibitory effect occurs at the level of **transcription** of the E-selectin gene and is dependent on the action of **Smad** proteins, a class of intracellular signaling proteins involved in mediating the cellular effects of TGF-beta(1). Furthermore, we demonstrate that these **Smad**-mediated effects in endothelial cells result from a novel competitive interaction between **Smad** proteins activated by TGF-beta(1) and nuclear factor kappaB (NFkappaB) proteins activated by inflammatory stimuli (such as cytokines or bacterial lipopolysaccharide) that is mediated by the transcriptional coactivator cyclic AMP response element-binding protein (CREB)-binding protein (**CBP**). Augmentation of the limited amount of **CBP** present in endothelial cells (via overexpression) or selective disruption of **Smad**-**CBP** interactions (via a dominant negative strategy) effectively antagonizes the ability of TGF-beta(1) to block proinflammatory E-selectin expression. These data thus demonstrate a novel mechanism of interaction between TGF-beta(1)-regulated **Smad** proteins and NFkappaB proteins regulated by inflammatory stimuli in vascular endothelial cells. This type of signaling mechanism may play an. . .

CN 0 (DNA-Binding Protein, Cyclic AMP-Responsive); 0 (DNA-Binding Proteins); 0 (E-Selectin); 0 (Interleukin-1); 0 (NF-kappa B); 0 (Smad2 protein); 0 (**Smad3** protein); 0 (Trans-Activators); 0 (Transforming Growth Factor beta)

L6 ANSWER 15 OF 24 MEDLINE
ACCESSION NUMBER: 2000300610 MEDLINE
DOCUMENT NUMBER: 20300610 PubMed ID: 10839991
TITLE: Repression of transforming-growth-factor-beta-mediated transcription by nuclear factor kappaB.
AUTHOR: Nagarajan R P; Chen F; Li W; Vig E; Harrington M A; Nakshatri H; Chen Y
CORPORATE SOURCE: Department of Medical and Molecular Genetics, Indiana University School of Medicine, 975 West Walnut Street IB130, Indianapolis, IN 46202, USA.
SOURCE: BIOCHEMICAL JOURNAL, (2000 Jun 15) 348 Pt 3 591-6. Journal code: 2984726R. ISSN: 0264-6021.
PUB. COUNTRY: ENGLAND: United Kingdom
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 200008
ENTRY DATE: Entered STN: 20000811
Last Updated on STN: 20000811
Entered Medline: 20000803

AB Activation of transforming growth factor-beta (TGF-beta) and activin receptors leads to phosphorylation of Sma- and Mad-related protein 2 (Smad2) and **Smad3**, which function as **transcription** factors to regulate gene expression. Smad7 is a regulatory protein which is able to inhibit TGF-beta and activin signalling in a negative-feedback loop, mediated by a direct regulation by **Smad3** and Smad4 via a **Smad**-binding element (SBE) in the Smad7 promoter. Interestingly, we found that the Smad7 promoter was also regulated by nuclear factor kappaB (NF-kappaB), a **transcription** factor which plays an important role in inflammation and the immune response. Expression of NF-kappaB p65 subunit was able to. . . TGF-beta- and activin-responsive promoters, since p65 also inhibited the forkhead-activin-signal-transducer-2-mediated activation of a Xenopus Mix.2 promoter, as well as the

Smad3-mediated activation of 3TP-lux which contains PMA-responsive elements and plasminogen-activator-inhibitor promoter. Activation of endogenous NF-kappaB by tumour necrosis factor-alpha (TNF-alpha). . . . cells. In human hepatoma HepG2 cells, TNF-alpha was able to inhibit TGF-beta- and activin-mediated transcriptional activation. Furthermore, overexpression of the **transcription** co-activator **p300** could abrogate the inhibitory effect of NF-kappaB on the Smad7 promoter. Taken together, these data have indicated a novel mode of crosstalk between the **Smad** and the NF-kappaB signalling cascades at the transcriptional level by competing for a limiting pool of **transcription** co-activators.

L6 ANSWER 16 OF 24 MEDLINE
ACCESSION NUMBER: 2000054408 MEDLINE
DOCUMENT NUMBER: 20054408 PubMed ID: 10585406
TITLE: The MEK pathway is required for stimulation of p21(WAF1/CIP1) by transforming growth factor-beta.
AUTHOR: Hu P P; Shen X; Huang D; Liu Y; Counter C; Wang X F
CORPORATE SOURCE: Department of Pharmacology, Duke University Medical Center, Durham, North Carolina 27710, USA.
CONTRACT NUMBER: DK-45746 (NIDDK)
SOURCE: JOURNAL OF BIOLOGICAL CHEMISTRY, (1999 Dec 10) 274 (50) 35381-7.
Journal code: 2985121R. ISSN: 0021-9258.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 200001
ENTRY DATE: Entered STN: 20000124
Last Updated on STN: 20020420
Entered Medline: 20000113

AB . . . (TGF-beta)can induce the cyclin-dependent kinase inhibitors p21 and p15 in a variety of cell types. We have shown previously that **Smad3** is required for the growth inhibitory activity of TGF-beta, whereas overexpression of **Smads** is not sufficient to activate the expression of p21 in HaCaT cells. These data suggest that an additional signaling pathway. . . p15 induction by TGF-beta. We found that TGF-beta can regulate the MAPK pathway, leading to the increased transactivation ability of **transcription** factor Elk. Constitutively active components in the MAPK pathway activate p21 expression, and inhibitors or dominant negative constructs for the. . . MAPK pathway significantly decrease p21 induction by TGF-beta. Both constitutively active MEK and inhibitors for MEK have no effect on **Smad** activity, including DNA binding, localization, and interaction with coactivator **p300/CBP**. These findings suggest that the MAPK pathway may be an independent pathway that is involved in p21 and p15 induction. . .

L6 ANSWER 17 OF 24 MEDLINE
ACCESSION NUMBER: 2000044797 MEDLINE
DOCUMENT NUMBER: 20044797 PubMed ID: 10575014
TITLE: c-Ski acts as a transcriptional co-repressor in transforming growth factor-beta signaling through interaction with smads.
AUTHOR: Akiyoshi S; Inoue H; Hanai J; Kusanagi K; Nemoto N; Miyazono K; Kawabata M
CORPORATE SOURCE: Department of Biochemistry, The Cancer Institute of Japanese Foundation for Cancer Research, Research for the Future Program, Japan Society for Promotion of Science, 1-37-1, Kami-ikebukuro, Toshima-ku, Tokyo 170-8455, Japan.
SOURCE: JOURNAL OF BIOLOGICAL CHEMISTRY, (1999 Dec 3) 274 (49) 35269-77.
Journal code: 2985121R. ISSN: 0021-9258.

PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ART[redacted]E)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 200002
ENTRY DATE: Entered STN: 20000209
Last Updated on STN: 20000209
Entered Medline: 20000203

AB **Smads** are intracellular signaling mediators of the transforming growth factor-beta (TGF-beta) superfamily that regulates a wide variety of biological processes. Among them, **Smads** 2 and 3 are activated specifically by TGF-beta. We identified c-Ski as a Smad2 interacting protein. c-Ski is the cellular homologue of the v-ski oncogene product and has been shown to repress **transcription** by recruiting histone deacetylase (HDAC). Smad2/3 interacts with c-Ski through its C-terminal MH2 domain in a TGF-beta-dependent manner. c-Ski contains two distinct **Smad**-binding sites with different binding properties. c-Ski strongly inhibits transactivation of various reporter genes by TGF-beta. c-Ski is incorporated in the **Smad** DNA binding complex, interferes with the interaction of **Smad3** with a transcriptional co-activator, **p300**, and in turn recruits HDAC. c-Ski is thus a transcriptional co-repressor that links **Smads** to HDAC in TGF-beta signaling.

CN. . . Proteins); 0 (E1A-associated p300 protein); 0 (Nuclear Proteins); 0 (Plasmids); 0 (Proto-Oncogene Proteins); 0 (Repressor Proteins); 0 (Smad2 protein); 0 (**Smad3** protein); 0 (Trans-Activators); 0 (Transforming Growth Factor beta); EC 2.3.1. (Acetyltransferases); EC 2.3.1.48 (histone acetyltransferase); EC 3.5.1.- (HDAC1 protein); EC. . .

L6 ANSWER 18 OF 24 MEDLINE
ACCESSION NUMBER: 1999428552 MEDLINE
DOCUMENT NUMBER: 99428552 PubMed ID: 10497242
TITLE: E1A inhibits transforming growth factor-beta signaling through binding to Smad proteins.
AUTHOR: Nishihara A; Hanai J; Imamura T; Miyazono K; Kawabata M
CORPORATE SOURCE: Department of Biochemistry, The Cancer Institute of Japanese Foundation for Cancer Research, 1-37-1 Kami-ikebukuro, Toshima-ku, Tokyo 170-8455, Japan.
SOURCE: JOURNAL OF BIOLOGICAL CHEMISTRY, (1999 Oct 1) 274 (40) 28716-23.
Journal code: 2985121R. ISSN: 0021-9258.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 199911
ENTRY DATE: Entered STN: 20000111
Last Updated on STN: 20000111
Entered Medline: 19991102

AB **Smads** form a recently identified family of proteins that mediate intracellular signaling of the transforming growth factor (TGF)-beta superfamily. **Smads** bind to DNA and act as transcriptional regulators. **Smads** interact with a variety of **transcription** factors, and the interaction is likely to determine the target specificity of gene induction. **Smads** also associate with transcriptional coactivators such as **p300** and **CBP**. E1A, an adenoviral oncoprotein, inhibits TGF-beta-induced transactivation, and the ability of E1A to bind **p300/CBP** is required for the inhibition. Here we determined the **Smad** interaction domain (SID) in **p300** and found that two adjacent regions are required for the interaction. One of the regions is the C/H3 domain conserved between **p300** and **CBP**, and the other is a nonconserved region. **p300** mutants containing SID inhibit

transactivation by TGF-beta in a dose-dependent manner. E1A inhibits the interaction [redacted] **Smad3** with a **p300** mutant that [redacted] tains SID but lacks the E1A binding domain. We found that E1A interacts specifically with receptor-regulated **Smads**, suggesting a novel mechanism whereby E1A antagonizes TGF-beta signaling.
CN 0 (Adenovirus E1A Proteins); 0 (DNA Probes); 0 (DNA-Binding Proteins); 0 (**Smad3** protein); 0 (Trans-Activators); 0 (Transforming Growth Factor beta)

L6 ANSWER 19 OF 24 CAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 1998:592673 CAPLUS
DOCUMENT NUMBER: 129:298669
TITLE: Physical and functional interaction of SMADs and p300/CBP
AUTHOR(S): Pouponnot, Celio; Jayaraman, Lata; Massague, Joan
CORPORATE SOURCE: Cell Biology Program and Howard Hughes Medical Institute, Memorial Sloan-Kettering Cancer Center, New York, NY, 10021, USA
SOURCE: Journal of Biological Chemistry (1998), 273(36), 22865-22868
CODEN: JBCHA3; ISSN: 0021-9258
PUBLISHER: American Society for Biochemistry and Molecular Biology
DOCUMENT TYPE: Journal
LANGUAGE: English
ST TGF beta **transcription SMAD p300 CBP**
IT **Transcription** factors
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
(C/EBP (CCAAT box/enhancer element-binding protein); phys. and functional interaction of **SMADs** and **p300/CBP** in transforming growth factor .beta. transcriptional responses)
IT **Transcription** factors
RL: BAC (Biological activity or effector, except adverse); BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
(**Smad**-1, Smad2, **Smad3** and Smad4; phys. and functional interaction of **SMADs** and **p300/CBP** in transforming growth factor .beta. transcriptional responses)
IT **Transcription** factors
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
(**p300**; phys. and functional interaction of **SMADs** and **p300/CBP** in transforming growth factor .beta. transcriptional responses)

L6 ANSWER 20 OF 24 MEDLINE
ACCESSION NUMBER: 1999060130 MEDLINE
DOCUMENT NUMBER: 99060130 PubMed ID: 9843571
TITLE: TGF-beta-induced phosphorylation of **Smad3** regulates its interaction with coactivator p300/CREB-binding protein.
AUTHOR: Shen X; Hu P P; Liberati N T; Datto M B; Frederick J P; Wang X F
CORPORATE SOURCE: Department of Pharmacology and Cancer Biology, Duke University Medical Center, Durham, North Carolina 27710, USA.
CONTRACT NUMBER: DK-45746 (NIDDK)
SOURCE: MOLECULAR BIOLOGY OF THE CELL, (1998 Dec) 9 (12) 3309-19.
Journal code: 9201390. ISSN: 1059-1524.

PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 199902
ENTRY DATE: Entered STN: 19990216
Last Updated on STN: 19990216
Entered Medline: 19990204

TI TGF-beta-induced phosphorylation of **Smad3** regulates its interaction with coactivator p300/CREB-binding protein.

AB **Smads** are intermediate effector proteins that transduce the TGF-beta signal from the plasma membrane to the nucleus, where they participate in transactivation of downstream target genes. We have shown previously that coactivators **p300**/CREB-binding protein are involved in TGF-beta-mediated transactivation of two Cdk inhibitor genes, p21 and p15. Here we examined the possibility that **Smads** function to regulate **transcription** by directly interacting with **p300**/CREB-binding protein. We show that **Smad3** can interact with a C-terminal fragment of **p300** in a temporal and phosphorylation-dependent manner. TGF-beta-mediated phosphorylation of **Smad3** potentiates the association between **Smad3** and **p300**, likely because of an induced conformational change that removes the autoinhibitory interaction between the N- and C-terminal domains of **Smad3**. Consistent with a role for **p300** in the **transcription** regulation of multiple genes, overexpression of a **Smad3** C-terminal fragment causes a general squelching effect on multiple TGF-beta-responsive reporter constructs. The adenoviral oncoprotein E1A can partially block **Smad**-dependent transcriptional activation by directly competing for binding to **p300**. Taken together, these findings define a new role for phosphorylation of **Smad3**: in addition to facilitating complex formation with Smad4 and promoting nuclear translocation, the phosphorylation-induced conformational change of **Smad3** modulates its interaction with coactivators, leading to transcriptional regulation.

CN 0 (Adenovirus E1A Proteins); 0 (DNA-Binding Proteins); 0 (E1A-associated p300 protein); 0 (Nuclear Proteins); 0 (Peptide Fragments); 0 (**Smad3** protein); 0 (Trans-Activators); 0 (Transforming Growth Factor beta)

L6 ANSWER 21 OF 24 MEDLINE
ACCESSION NUMBER: 1998344008 MEDLINE
DOCUMENT NUMBER: 98344008 PubMed ID: 9679060
TITLE: The tumor suppressor Smad4/DPC4 and transcriptional adaptor
CBP/p300 are coactivators for **smad3** in TGF-beta-induced transcriptional activation.
AUTHOR: Feng X H; Zhang Y; Wu R Y; Derynck R
CORPORATE SOURCE: Departments of Growth and Development and Anatomy, and Programs in Cell Biology and Developmental Biology, University of California, San Francisco, California 94143-0640 USA.
CONTRACT NUMBER: CA63101 (NCI)
SOURCE: GENES AND DEVELOPMENT, (1998 Jul 15) 12 (14) 2153-63. Journal code: 8711660. ISSN: 0890-9369.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 199808
ENTRY DATE: Entered STN: 19980903
Last Updated on STN: 19980903
Entered Medline: 19980821

TI The tumor suppressor Smad4/DPC4 and transcriptional adaptor CBP/p300 are coactivators for **smad3** in TGF-beta-induced transcriptional activation.

AB **Smads** regulate **transcription** of defined genes in response to [redacted]-beta receptor activation, although the mechanisms of **Smad**-mediated **transcription** are not well understood. We demonstrate that the TGF-beta-inducible **Smad3** uses the tumor suppressor Smad4/DPC4 and **CBP/p300** as transcriptional coactivators, which associate with **Smad3** in response to TGF-beta. The association of **CBP** with **Smad3** was localized to the carboxyl terminus of **Smad3**, which is required for transcriptional activation, and a defined segment in **CBP**. Furthermore, **CBP/p300** stimulated both TGF-beta- and **Smad**-induced **transcription** in a Smad4/DPC4-dependent fashion. **Smad3** transactivation and TGF-beta-induced **transcription** were inhibited by expressing E1A, which interferes with **CBP** functions. The coactivator functions and physical interactions of Smad4 and **CBP/p300** with **Smad3** allow a model for the induction of gene expression in response to TGF-beta.

CN. . . (DNA-Binding Proteins); 0 (E1A-associated p300 protein); 0 (Nuclear Proteins); 0 (Nucleoproteins); 0 (Plasminogen Activator Inhibitor 1); 0 (Smad2 protein); 0 (**Smad3** protein); 0 (Smad4 protein); 0 (Trans-Activators); 0 (Transforming Growth Factor beta)

L6 ANSWER 22 OF 24 MEDLINE
ACCESSION NUMBER: 1998344004 MEDLINE
DOCUMENT NUMBER: 98344004 PubMed ID: 9679056
TITLE: TGF-beta-stimulated cooperation of smad proteins with the coactivators CBP/p300.
AUTHOR: Janknecht R; Wells N J; Hunter T
CORPORATE SOURCE: Molecular Biology and Virology Laboratory, The Salk Institute, La Jolla, California 92037 USA.. rjanknecht@aim.salk.edu
CONTRACT NUMBER: CA14195 (NCI)
CA39780 (NCI)
SOURCE: GENES AND DEVELOPMENT, (1998 Jul 15) 12 (14) 2114-9. Journal code: 8711660. ISSN: 0890-9369.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 199808
ENTRY DATE: Entered STN: 19980903
Last Updated on STN: 19980903
Entered Medline: 19980821

AB TGF-beta and activin induce the phosphorylation and activation of Smad2 and **Smad3**, but how these proteins stimulate gene **transcription** is poorly understood. We report that TGF-beta receptor phosphorylation of **Smad3** promotes its interaction with the paralogous coactivators **CBP** and **p300**, whereas **CBP/p300** binding to nonphosphorylated **Smad3** or its oligomerization partner Smad4 is negatively regulated by **Smad** -intramolecular interactions. Furthermore, **p300** and TGF-beta receptor-phosphorylated **Smad3** synergistically augment transcriptional activation. Thus, **CBP/p300** are important components of activin/TGF-beta signaling and may mediate the antioncogenic functions of Smad2 and Smad4.

CN. . . (CREB-binding protein); 0 (DNA-Binding Proteins); 0 (E1A-associated p300 protein); 0 (Nuclear Proteins); 0 (Recombinant Fusion Proteins); 0 (Smad2 protein); 0 (**Smad3** protein); 0 (Smad4 protein); 0 (Trans-Activators); 0 (Transforming Growth Factor beta)

L6 ANSWER 23 OF 24 MEDLINE
ACCESSION NUMBER: 1999030961 MEDLINE
DOCUMENT NUMBER: 99030961 PubMed ID: 9813111
TITLE: Role of p300, a transcriptional coactivator, in signalling of TGF-beta.
AUTHOR: Nishihara A; Hanai J I; Okamoto N; Yanagisawa J; Kato S;

Miyazono K; Kawabata M
CORPORATE SOURCE: [redacted]Department of Biochemistry, Th[redacted]ancer Institute, Japanese Foundation for Cancer Research (JFCR), and Research for the Future Program, Japan.
SOURCE: GENES TO CELLS, (1998 Sep) 3 (9) 613-23.
Journal code: 9607379. ISSN: 1356-9597.
PUB. COUNTRY: ENGLAND: United Kingdom
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 199812
ENTRY DATE: Entered STN: 19990115
Last Updated on STN: 19990115
Entered Medline: 19981221

AB BACKGROUND: **Smad** proteins are novel transcriptional regulators mediating the signalling of the transforming growth factor-beta (TGF-beta) superfamily. Coactivators such as **p300/CBP** promote transactivation by various **transcription** factors through a direct interaction with them. Adenoviral oncoprotein E1A, which binds **p300**, was shown to inhibit the signalling of TGF-beta. These findings raise the possibility that **p300** may be involved in TGF-beta signalling. RESULTS: We investigated whether **p300** is involved in transactivation by **Smads**. **p300** enhanced the **Smad**-induced transactivation of p3TP-Lux, a TGF-beta responsive reporter. E1A inhibited this enhancement, and the inhibition required its ability to bind **p300/CBP**. **p300** and **Smad3**, as well as Smad2, interacted in vivo in a ligand-dependent manner. The binding region in **Smad3** was its C-terminal half that was previously shown to possess an intrinsic transactivation activity. The binding region in **p300** was mapped to its C-terminal 678 amino acids. The minimal Smad2/3-interacting region, as well as the rest of the **p300**, inhibited the transactivation of p3TP-Lux in a dominant-negative fashion. CONCLUSION: **p300** interacted with Smad2 and **Smad3** in a ligand-dependent manner, and enhanced the transactivation by **Smads**. Our results present the molecular basis of the transactivation by **Smad** proteins.

CN. . . 0 (DNA-Binding Proteins); 0 (E1A-associated p300 protein); 0 (Nuclear Proteins); 0 (Receptors, Transforming Growth Factor beta); 0 (Smad2 protein); 0 (**Smad3** protein); 0 (Trans-Activators); 0 (Transforming Growth Factor beta); EC 1.13.12.- (Luciferase)

L6 ANSWER 24 OF 24 MEDLINE
ACCESSION NUMBER: 97242223 MEDLINE
DOCUMENT NUMBER: 97242223 PubMed ID: 9125213
TITLE: Dominant-negative SMAD-3 interferes with transcriptional activation by multiple agonists.
AUTHOR: Mucsi I; Goldberg H J
CORPORATE SOURCE: Department of Pediatrics, Hospital for Sick Children, University of Toronto, Ontario, Canada.
SOURCE: BIOCHEMICAL AND BIOPHYSICAL RESEARCH COMMUNICATIONS, (1997 Mar 17) 232 (2) 517-21.
Journal code: 0372516. ISSN: 0006-291X.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 199704
ENTRY DATE: Entered STN: 19970506
Last Updated on STN: 19970506
Entered Medline: 19970422

AB **Smad** proteins have recently been identified as mediators of transcriptional activation by members of the transforming growth factor-beta superfamily. To determine if **Smads** might also be

involved in inducing gene **transcription** in response to other agonists, expression vectors for dominant-negative **Smad** proteins were constructed. These plasmids were transiently cotransfected with luciferase reporter genes and the effects of various agonists on reporter gene activity evaluated in NIH 3T3 cells. Dominant-negative **Smad3**, but not other dominant-negative **Smads**, reduced stimulation of the plasminogen activator inhibitor-1 (PAI-1) and other gene promoters by phorbol ester, cAMP, and platelet-derived growth factor.. . . the PAI-1 promoter by TGF-beta or prostaglandin F2 alpha, and transactivation by c-Jun or JunB were not inhibited by dominant-negative **Smad3**, supporting the specificity of this mutant. These results suggest that **Smad3**, like CREB-binding protein (**CBP**), may participate in transcriptional activation by multiple agonists.

CN 0 (DNA-Binding Proteins); 0 (Genetic Vectors); 0 (**Smad3** protein); EC 3.4.24.- (Collagenases)

=> log y

COST IN U.S. DOLLARS	SINCE FILE ENTRY	TOTAL SESSION
FULL ESTIMATED COST	22.70	22.91

DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)	SINCE FILE ENTRY	TOTAL SESSION
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NEWS 3	Apr 09	BEILSTEIN: Reload and Implementation of a New Subject Area
NEWS 4	Apr 09	ZDB will be removed from STN
NEWS 5	Apr 19	US Patent Applications available in IFICDB, IFIPAT, and IFIUDB
NEWS 6	Apr 22	Records from IP.com available in CAPLUS, HCAPLUS, and ZCAPLUS
NEWS 7	Apr 22	BIOSIS Gene Names now available in TOXCENTER
NEWS 8	Apr 22	Federal Research in Progress (FEDRIP) now available
NEWS 9	Jun 03	New e-mail delivery for search results now available
NEWS 10	Jun 10	MEDLINE Reload
NEWS 11	Jun 10	PCTFULL has been reloaded
NEWS 12	Jul 02	FOREGE no longer contains STANDARDS file segment
NEWS 13	Jul 22	USAN to be reloaded July 28, 2002; saved answer sets no longer valid
NEWS 14	Jul 29	Enhanced polymer searching in REGISTRY
NEWS 15	Jul 30	NETFIRST to be removed from STN
NEWS 16	Aug 08	CANCERLIT reload
NEWS 17	Aug 08	PHARMAMarketLetter(PHARMAML) - new on STN
NEWS 18	Aug 08	NTIS has been reloaded and enhanced
NEWS 19	Aug 19	Aquatic Toxicity Information Retrieval (AQUIRE) now available on STN
NEWS 20	Aug 19	IFIPAT, IFICDB, and IFIUDB have been reloaded
NEWS 21	Aug 19	The MEDLINE file segment of TOXCENTER has been reloaded
NEWS 22	Aug 26	Sequence searching in REGISTRY enhanced
NEWS 23	Sep 03	JAPIO has been reloaded and enhanced

NEWS EXPRESS	February 1 CURRENT WINDOWS VERSION IS V6.0d, CURRENT MACINTOSH VERSION IS V6.0a(ENG) AND V6.0Ja(JP), AND CURRENT DISCOVER FILE IS DATED 05 FEBRUARY 2002
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NEWS LOGIN	Welcome Banner and News Items
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FILE 'HOME' ENTERED AT 07:41:57 ON 09 SEP 2002

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FULL ESTIMATED COST	0.21	0.21

FILE 'MEDLINE' ENTERED AT 07:42:07 ON 09 SEP 2002

FILE 'BIOSIS' ENTERED AT 07:42:07 ON 09 SEP 2002

FILE 'EMBASE' ENTERED AT 07:42:07 ON 09 SEP 2002

FILE 'CAPLUS' ENTERED AT 07:42:07 ON 09 SEP 2002

=> s kato s/au

L1 5944 KATO S/AU

=> s yanagisawa j/au

L2 138 YANAGISAWA J/AU

=> s l1 and l2

L3 40 L1 AND L2

=> dup rem l3

PROCESSING COMPLETED FOR L3
L4 25 DUP REM L3 (15 DUPLICATES REMOVED)

=> d l4 total ibib

L4 ANSWER 1 OF 25 EMBASE COPYRIGHT 2002 ELSEVIER SCI. B.V.
ACCESSION NUMBER: 2002179344 EMBASE
TITLE: Ligand-selective potentiation of rat mineralocorticoid receptor activation function 1 by a CBP-containing histone acetyltransferase complex.
AUTHOR: Kitagawa H.; **Yanagisawa J.**; Fuse H.; Ogawa S.; Yogiashi Y.; Okuno A.; Nagasawa H.; Nakajima T.; Matsumoto T.; **Kato S.**
CORPORATE SOURCE: S. Kato, Inst. of Molec./Cellular Bioscience, University of Tokyo, 1-1-1 Yayoi, Bunkyo-ku, Tokyo 113-0032, Japan. uskato@mail.ecc.u-tokyo.ac.jp
SOURCE: Molecular and Cellular Biology, (2002) 22/11 (3698-3706). Refs: 61
ISSN: 0270-7306 CODEN: MCEBD4
COUNTRY: United States
DOCUMENT TYPE: Journal; Article
FILE SEGMENT: 003 Endocrinology
029 Clinical Biochemistry

LANGUAGE: English
SUMMARY LANGUAGE English

L4 ANSWER 2 OF 25 EMBASE COPYRIGHT 2002 ELSEVIER SCI. B.V.
ACCESSION NUMBER: 2002126051 EMBASE
TITLE: Nuclear receptor function requires a TFTC-type histone acetyl transferase complex.
AUTHOR: **Yanagisawa J.**; Kitagawa H.; Yanagida M.; Wada O.; Ogawa S.; Nakagomi M.; Oishi H.; Yamamoto Y.; Nagasawa H.; McMahon S.B.; Cole M.D.; Tora L.; Takahashi N.; **Kato S.**
CORPORATE SOURCE: S. Kato, CREST, Japan Science and Technology, 4-1-8 Honcho,
Kawaguchi, Saitama 332-0012, Japan. uskato@mail.ecc.u-tokyo.ac.jp
SOURCE: Molecular Cell, (2002) 9/3 (553-562).
Refs: 44
ISSN: 1097-2765 CODEN: MOCEFL
COUNTRY: United States
DOCUMENT TYPE: Journal; Article
FILE SEGMENT: 029 Clinical Biochemistry
LANGUAGE: English
SUMMARY LANGUAGE: English

L4 ANSWER 3 OF 25 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
ACCESSION NUMBER: 2002:455402 BIOSIS
DOCUMENT NUMBER: PREV200200455402
TITLE: A novel antiestrogen, TAS-108 (SR16234) shows full antagonistic activity to ER alpha and beta with a unique mechanism.
AUTHOR(S): Yamamoto, Y. (1); Wada, O. (1); **Yanagisawa, J. (1)**; **Kato, S. (1)**; Kitazato, K.
CORPORATE SOURCE: (1) Institute of Molecular and Cellular Biosciences, University of Tokyo, Tokyo Japan
SOURCE: European Journal of Cancer, (March, 2002) Vol. 38, No. Supplement 3, pp. S96-S97.
http://www.elsevier.com/locate/ejca. print.
Meeting Info.: 3rd European Breast Cancer Conference Barcelona, Spain March 19-23, 2002
ISSN: 0959-8049.
DOCUMENT TYPE: Conference
LANGUAGE: English

L4 ANSWER 4 OF 25 MEDLINE
ACCESSION NUMBER: 2001670314 MEDLINE
DOCUMENT NUMBER: 21560962 PubMed ID: 11553641
TITLE: The tamoxifen-responsive estrogen receptor alpha mutant D351Y shows reduced tamoxifen-dependent interaction with corepressor complexes.
AUTHOR: Yamamoto Y; Wada O; Suzawa M; Yogiashi Y; Yano T; **Kato S; Yanagisawa J**
CORPORATE SOURCE: Institute of Molecular and Cellular Biosciences, University
of Tokyo, 1-1-1 Yayoi, Bunkyo-ku, Tokyo, 113-0034, Japan.
SOURCE: JOURNAL OF BIOLOGICAL CHEMISTRY, (2001 Nov 16) 276 (46) 42684-91.
Journal code: 2985121R. ISSN: 0021-9258.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 200112
ENTRY DATE: Entered STN: 20011122
Last Updated on STN: 20020123
Entered Medline: 20011226

L4 ANSWER 5 OF [redacted] MEDLINE DUPLICATE 1
ACCESSION NUMBER: 2001216886 MEDLINE
DOCUMENT NUMBER: 21150109 PubMed ID: 11250900
TITLE: A subfamily of RNA-binding DEAD-box proteins acts as an estrogen receptor alpha coactivator through the N-terminal activation domain (AF-1) with an RNA coactivator, SRA.
AUTHOR: Watanabe M; **Yanagisawa J**; Kitagawa H; Takeyama K; Ogawa S; Arao Y; Suzawa M; Kobayashi Y; Yano T; Yoshikawa H; Masuhiro Y; **Kato S**
CORPORATE SOURCE: Institute of Molecular and Cellular Biosciences, University of Tokyo, Yayoi, Bunkyo-ku, Tokyo 113-0033, Japan.
SOURCE: EMBO JOURNAL, (2001 Mar 15) 20 (6) 1341-52.
Journal code: 8208664. ISSN: 0261-4189.
PUB. COUNTRY: England: United Kingdom
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 200104
ENTRY DATE: Entered STN: 20010425
Last Updated on STN: 20010425
Entered Medline: 20010419

L4 ANSWER 6 OF 25 MEDLINE DUPLICATE 2
ACCESSION NUMBER: 2001680234 MEDLINE
DOCUMENT NUMBER: 21583228 PubMed ID: 11726214
TITLE: N-terminal activation function is dominant in ligand-dependent transactivation of medaka estrogen receptor alpha in human cells.
AUTHOR: Mezaki Y; Yoshida T; **Yanagisawa J**; **Kato S**
CORPORATE SOURCE: Institute of Molecular and Cellular Biosciences, University of Tokyo, 1-1-1 Yayoi, Bunkyo-ku, Tokyo 113-0032, Japan.
SOURCE: BIOCHEMICAL AND BIOPHYSICAL RESEARCH COMMUNICATIONS, (2001 Dec 7) 289 (3) 763-8.
Journal code: 0372516. ISSN: 0006-291X.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 200201
ENTRY DATE: Entered STN: 20011203
Last Updated on STN: 20020124
Entered Medline: 20020102

L4 ANSWER 7 OF 25 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
ACCESSION NUMBER: 2002:4979 BIOSIS
DOCUMENT NUMBER: PREV200200004979
TITLE: Inhibition of adipogenesis by cytokines with suppression of PPARgamma function through TAK1/TAB1-NIK promotes osteoblastogenesis.
AUTHOR(S): Suzawa, M. (1); Takada, I. (1); **Yanagisawa, J. (1)**; Takeuchi, Y.; Goroh, Y. (1); Matsumoto, K.; **Kato, S. (1)**
CORPORATE SOURCE: (1) IMBC, University of Tokyo/CREST, Tokyo Japan
SOURCE: Journal of Bone and Mineral Research, (September, 2001) Vol. 16, No. Suppl. 1, pp. S496. print.
Meeting Info.: Twenty-Third Annual Meeting of the American Society for Bone and Mineral Research Phoenix, Arizona, USA October 12-16, 2001
ISSN: 0884-0431.
DOCUMENT TYPE: Conference
LANGUAGE: English

L4 ANSWER 8 OF BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
ACCESSION NUMBER: 2001:557149 BIOSIS
DOCUMENT NUMBER: PREV200100557149
TITLE: A novel chromatin remodeling complex function as a transcriptional modulator of vitamin D receptor (VDR.
AUTHOR(S): Kitagawa, H. (1); **Yanagisawa, J. (1)**; Ogawa, S. (1); Matsumoto, T.; **Kato, S. (1)**
CORPORATE SOURCE: (1) Institute of Molecular and Cellular Biosciences, University of Tokyo/CREST, Tokyo Japan
SOURCE: Journal of Bone and Mineral Research, (September, 2001) Vol. 16, No. Suppl. 1, pp. S308. print.
Meeting Info.: Twenty-Third Annual Meeting of the American Society for Bone and Mineral Research Phoenix, Arizona, USA
October 12-16, 2001
ISSN: 0884-0431.
DOCUMENT TYPE: Conference
LANGUAGE: English
SUMMARY LANGUAGE: English

L4 ANSWER 9 OF 25 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
ACCESSION NUMBER: 2002:143080 BIOSIS
DOCUMENT NUMBER: PREV200200143080
TITLE: Distinct modulation of ER-alpha,beta-mediated activity by TAS-108 (SR16234) may lead to unique intranuclear events in
tumor, uterine and other normal tissues.
AUTHOR(S): Yamamoto, Y. (1); Wada, O. (1); **Yanagisawa, J. (1)**; **Kato, S. (1)**; Kitazato, K.
CORPORATE SOURCE: (1) University of Tokyo, Tokyo Japan
SOURCE: Breast Cancer Research and Treatment, (October, 2001) Vol. 69, No. 3, pp. 290. http://www.kluweronline.com/issn/0167-6806. print.
Meeting Info.: 24th Annual San Antonio Breast Cancer Symposium San Antonio, Texas, USA December 10-13, 2001
ISSN: 0167-6806.
DOCUMENT TYPE: Conference
LANGUAGE: English

L4 ANSWER 10 OF 25 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
ACCESSION NUMBER: 2001:468697 BIOSIS
DOCUMENT NUMBER: PREV200100468697
TITLE: Molecular mechanism of actions of Tas-108 (SR 16234), a novel steroidal selective estrogen receptor modulator (SERM.
AUTHOR(S): Yamamoto, Y. (1); Wada, O.; **Yanagisawa, J.**; Toko, T.; Tanabe, M.; **Kato, S.**; Yamada, Y.
CORPORATE SOURCE: (1) SRI International, Menlo Park, CA USA
SOURCE: Proceedings of the American Association for Cancer Research
Annual Meeting, (March, 2001) Vol. 42, pp. 270. print.
Meeting Info.: 92nd Annual Meeting of the American Association for Cancer Research New Orleans, LA, USA March 24-28, 2001
ISSN: 0197-016X.
DOCUMENT TYPE: Conference
LANGUAGE: English
SUMMARY LANGUAGE: English

L4 ANSWER 11 OF 25 MEDLINE DUPLICATE 3
ACCESSION NUMBER: 2000283585 MEDLINE
DOCUMENT NUMBER: 20283585 PubMed ID: 10747867
TITLE: p300 mediates functional synergism between AF-1 and AF-2 of
estrogen receptor alpha and beta by interacting directly

with the N-terminal A/B domains.
AUTHOR: Kobayashi Y; Kitamoto T; Masu[redacted]o Y; Watanabe M; Kase T; Metzger D; **Yanagisawa J**; **Kato S**
CORPORATE SOURCE: Institute of Molecular and Cellular Biosciences, The University of Tokyo, Bunkyo-ku, Tokyo 113-0032, Japan.
SOURCE: JOURNAL OF BIOLOGICAL CHEMISTRY, (2000 May 26) 275 (21) 15645-51.
Journal code: 2985121R. ISSN: 0021-9258.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 200006
ENTRY DATE: Entered STN: 20000714
Last Updated on STN: 20000714
Entered Medline: 20000630

L4 ANSWER 12 OF 25 MEDLINE DUPLICATE 4
ACCESSION NUMBER: 2000456130 MEDLINE
DOCUMENT NUMBER: 20405871 PubMed ID: 10947845
TITLE: Molecular mechanism of a cross-talk between oestrogen and growth factor signalling pathways.
AUTHOR: **Kato S**; Masuhiro Y; Watanabe M; Kobayashi Y; Takeyama K I; Endoh H; **Yanagisawa J**
CORPORATE SOURCE: The Institute of Molecular and Celluar Biosciences, The University of Tokyo, 1-1-1 Yayoi, Bunkyo-ku, Tokyo 113-0032, Japan.. uskato@mail.ecc.u-tokyo.ac.jp
SOURCE: GENES TO CELLS, (2000 Aug) 5 (8) 593-601. Ref: 55
Journal code: 9607379. ISSN: 1356-9597.
PUB. COUNTRY: ENGLAND: United Kingdom
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
General Review; (REVIEW)
(REVIEW, ACADEMIC)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 200009
ENTRY DATE: Entered STN: 20001005
Last Updated on STN: 20001005
Entered Medline: 20000927

L4 ANSWER 13 OF 25 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
ACCESSION NUMBER: 2000:403949 BIOSIS
DOCUMENT NUMBER: PREV200000403949
TITLE: Suppression of PPARgamma mediated bone marrow adipogenesis by NIK-mediated NF-kappaB signaling pathways.
AUTHOR(S): Suzawa, M. (1); **Yanagisawa, J. (1)**; Takada, I. (1); Takeuchi, Y.; Gotoh, Y. (1); **Kato, S. (1)**
CORPORATE SOURCE: (1) University of Tokyo, Institute of Molecular and Cellular Biosciences, Tokyo Japan
SOURCE: Journal of Bone and Mineral Research, (September, 2000) Vol. 15, No. Suppl. 1, pp. S492. print.
Meeting Info.: Twenty-Second Annual Meeting of the American
Society for Bone and Mineral Research Toronto, Ontario, Canada September 22-26, 2000 American Society for Bone and Mineral Research
. ISSN: 0884-0431.
DOCUMENT TYPE: Conference
LANGUAGE: English
SUMMARY LANGUAGE: English

L4 ANSWER 14 OF 25 MEDLINE DUPLICATE 5
ACCESSION NUMBER: 2000175216 MEDLINE
DOCUMENT NUMBER: 20175216 PubMed ID: 10708567
TITLE: p300/CBP acts as a coactivator of the cone-rod homeobox transcription factor.

AUTHOR: Yanagi Y; Masuhiro Y; Mori M; **Yanagisawa J**; **Kato S**
CORPORATE SOURCE: Department of Ophthalmology, University of Tokyo School of Medicine, 7-3-1 Hongo, Bunkyo-ku, Tokyo, 113-8655, Japan.
SOURCE: BIOCHEMICAL AND BIOPHYSICAL RESEARCH COMMUNICATIONS, (2000 Mar 16) 269 (2) 410-4.
Journal code: 0372516. ISSN: 0006-291X.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 200004
ENTRY DATE: Entered STN: 20000427
Last Updated on STN: 20000427
Entered Medline: 20000419

L4 ANSWER 15 OF 25 MEDLINE DUPLICATE 6
ACCESSION NUMBER: 1999240671 MEDLINE
DOCUMENT NUMBER: 99240671 PubMed ID: 10224044
TITLE: Positive and negative modulation of vitamin D receptor function by transforming growth factor-beta signaling through smad proteins.
AUTHOR: Yanagi Y; Suzawa M; Kawabata M; Miyazono K; **Yanagisawa J**; **Kato S**
CORPORATE SOURCE: Institute of Molecular and Cellular Biosciences, University of Tokyo, Yayoi 1-1-1, Bunkyo-ku, Tokyo 113-0034, Japan.
SOURCE: JOURNAL OF BIOLOGICAL CHEMISTRY, (1999 May 7) 274 (19) 12971-4.
Journal code: 2985121R. ISSN: 0021-9258.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 199906
ENTRY DATE: Entered STN: 19990614
Last Updated on STN: 19990614
Entered Medline: 19990603

L4 ANSWER 16 OF 25 MEDLINE DUPLICATE 7
ACCESSION NUMBER: 1999340236 MEDLINE
DOCUMENT NUMBER: 99340236 PubMed ID: 10409727
TITLE: Purification and identification of p68 RNA helicase acting as a transcriptional coactivator specific for the activation function 1 of human estrogen receptor alpha.
AUTHOR: Endoh H; Maruyama K; Masuhiro Y; Kobayashi Y; Goto M; Tai H; **Yanagisawa J**; Metzger D; Hashimoto S; **Kato S**
CORPORATE SOURCE: Molecular Medicine Laboratories, Institute for Drug Discovery Research, Yamanouchi Pharmaceutical, Tsukuba, Ibaraki 305-8585, Japan.
SOURCE: MOLECULAR AND CELLULAR BIOLOGY, (1999 Aug) 19 (8) 5363-72.
Journal code: 8109087. ISSN: 0270-7306.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 199908
ENTRY DATE: Entered STN: 19990827
Last Updated on STN: 20001027
Entered Medline: 19990819

L4 ANSWER 17 OF 25 MEDLINE DUPLICATE 8
ACCESSION NUMBER: 1999157117 MEDLINE
DOCUMENT NUMBER: 99157117 PubMed ID: 10037600
TITLE: Convergence of transforming growth factor-beta and vitamin

D signaling pathways on SMAD transcriptional coactivators.
AUTHOR: **Yanagisawa J**; Yanagi Y; Masuhiro Y; Suzawa M; Watanabe M; Kashiwagi K; Toriyabe T; Kawabata M; Miyazono K; **Kato S**
CORPORATE SOURCE: Institute of Molecular and Cellular Biosciences, University of Tokyo, Yayoi, Bunkyo-ku, Tokyo 113-0032, Japan.
SOURCE: SCIENCE, (1999 Feb 26) 283 (5406) 1317-21. Journal code: 0404511. ISSN: 0036-8075.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 199903
ENTRY DATE: Entered STN: 19990326
Last Updated on STN: 19990326
Entered Medline: 19990312

L4 ANSWER 18 OF 25 MEDLINE DUPLICATE 9
ACCESSION NUMBER: 1999108079 MEDLINE
DOCUMENT NUMBER: 99108079 PubMed ID: 9891040
TITLE: Selective interaction of vitamin D receptor with transcriptional coactivators by a vitamin D analog.
AUTHOR: Takeyama K; Masuhiro Y; Fuse H; Endoh H; Murayama A; Kitanaka S; Suzawa M; **Yanagisawa J**; **Kato S**
CORPORATE SOURCE: Institute of Molecular and Cellular Biosciences, The University of Tokyo, Tokyo 113, Japan.
SOURCE: MOLECULAR AND CELLULAR BIOLOGY, (1999 Feb) 19 (2) 1049-55. Journal code: 8109087. ISSN: 0270-7306.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 199902
ENTRY DATE: Entered STN: 19990301
Last Updated on STN: 19990301
Entered Medline: 19990212

L4 ANSWER 19 OF 25 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.
ACCESSION NUMBER: 1999:431104 BIOSIS
DOCUMENT NUMBER: PREV199900431104
TITLE: TGFbeta/BMP suppresses PPARgamma function though TAK1/TAB1 mediated signaling pathway.
AUTHOR(S): Suzawa, M. (1); **Yanagisawa, J. (1)**; Takeuchi, Y.; Kodera, Y. (1); Takeyama, K. (1); Shibuya, H.; Goto, Y. (1); **Kato, S. (1)**
CORPORATE SOURCE: (1) Institute of Molecular and Cellular Bioscience, University of Tokyo, Bunkyo-ku, Tokyo Japan
SOURCE: Journal of Bone and Mineral Research, (Sept., 1999) Vol. 14, No. SUPPL. 1, pp. S212.
Meeting Info.: Twenty-First Annual Meeting of the American Society for Bone and Mineral Research St. Louis, Missouri, USA September 30-October 4, 1999 American Society for Bone and Mineral Research
. ISSN: 0884-0431.
DOCUMENT TYPE: Conference
LANGUAGE: English

L4 ANSWER 20 OF 25 MEDLINE DUPLICATE 10
ACCESSION NUMBER: 1998249811 MEDLINE
DOCUMENT NUMBER: 98249811 PubMed ID: 9588212
TITLE: A putative tumor suppressor, TSG101, acts as a transcriptional suppressor through its coiled-coil domain.

AUTHOR: Watanabe M; Yanagi Y; Masuhiro Y; Yano T; Yoshikawa H; **Yanagisawa J; Kato S**
CORPORATE SOURCE: Institute of Molecular and Cellular Biosciences, Faculty of Medicine, University of Tokyo, Japan.
SOURCE: BIOCHEMICAL AND BIOPHYSICAL RESEARCH COMMUNICATIONS, (1998 Apr 28) 245 (3) 900-5.
Journal code: 0372516. ISSN: 0006-291X.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 199806
ENTRY DATE: Entered STN: 19980618
Last Updated on STN: 19980618
Entered Medline: 19980605

L4 ANSWER 21 OF 25 MEDLINE DUPLICATE 11
ACCESSION NUMBER: 1998135520 MEDLINE
DOCUMENT NUMBER: 98135520 PubMed ID: 9486994
TITLE: Inactivating mutations in the 25-hydroxyvitamin D3 1alpha-hydroxylase gene in patients with pseudovitamin D-deficiency rickets.
COMMENT: Comment in: N Engl J Med. 1998 Mar 5;338(10):681-2
AUTHOR: Kitanaka S; Takeyama K; Murayama A; Sato T; Okumura K; Nogami M; Hasegawa Y; Niimi H; **Yanagisawa J**; Tanaka T; **Kato S**
CORPORATE SOURCE: Institute of Molecular and Cellular Biosciences, University of Tokyo, Japan.
SOURCE: NEW ENGLAND JOURNAL OF MEDICINE, (1998 Mar 5) 338 (10) 653-61.
Journal code: 0255562. ISSN: 0028-4793.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Abridged Index Medicus Journals; Priority Journals
ENTRY MONTH: 199803
ENTRY DATE: Entered STN: 19980312
Last Updated on STN: 19980312
Entered Medline: 19980305

L4 ANSWER 22 OF 25 MEDLINE DUPLICATE 12
ACCESSION NUMBER: 1999030961 MEDLINE
DOCUMENT NUMBER: 99030961 PubMed ID: 9813111
TITLE: Role of p300, a transcriptional coactivator, in signalling of TGF-beta.
AUTHOR: Nishihara A; Hanai J I; Okamoto N; **Yanagisawa J**; **Kato S**; Miyazono K; Kawabata M
CORPORATE SOURCE: Department of Biochemistry, The Cancer Institute, Japanese Foundation for Cancer Research (JFCR), and Research for the Future Program, Japan.
SOURCE: GENES TO CELLS, (1998 Sep) 3 (9) 613-23.
Journal code: 9607379. ISSN: 1356-9597.
PUB. COUNTRY: ENGLAND: United Kingdom
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 199812
ENTRY DATE: Entered STN: 19990115
Last Updated on STN: 19990115
Entered Medline: 19981221

L4 ANSWER 23 OF 25 MEDLINE DUPLICATE 13
ACCESSION NUMBER: 1998354489 MEDLINE

DOCUMENT NUMBER: 98354489 PubMed ID: 9690035
TITLE: The importance of 25-hydroxyvitamin D3 1 alpha-hydroxylase gene in vitamin D-dependent rickets.
AUTHOR: **Kato S**; **Yanagisawa J**; Murayama A; Kitanaka S; Takeyama K
CORPORATE SOURCE: Institute of Molecular and Cellular Biosciences, University of Tokyo, Japan.. uskato@hongo.ecc.u-tokyo.ac.jp
SOURCE: CURRENT OPINION IN NEPHROLOGY AND HYPERTENSION, (1998 Jul) 7 (4) 377-83. Ref: 61
Journal code: 9303753. ISSN: 1062-4821.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
General Review; (REVIEW)
(REVIEW, TUTORIAL)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 199811
ENTRY DATE: Entered STN: 19990106
Last Updated on STN: 19990106
Entered Medline: 19981106

L4 ANSWER 24 OF 25 MEDLINE DUPLICATE 14
ACCESSION NUMBER: 1999069606 MEDLINE
DOCUMENT NUMBER: 99069606 PubMed ID: 9852396
TITLE: Molecular mechanism of a cross-talk between estrogen and growth-factor signaling pathways.
AUTHOR: **Kato S**; Kitamoto T; Masuhiro Y; **Yanagisawa J**
CORPORATE SOURCE: Institute of Molecular and Cellular Biosciences, University of Tokyo, Tokyo, Japan.. uskato@hongo.ecc.u-tokyo.ac.jp
SOURCE: ONCOLOGY, (1998 Dec) 55 Suppl 1 5-10. Ref: 32
Journal code: 0135054. ISSN: 0030-2414.
PUB. COUNTRY: Switzerland
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
General Review; (REVIEW)
(REVIEW, TUTORIAL)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 199902
ENTRY DATE: Entered STN: 19990216
Last Updated on STN: 19990216
Entered Medline: 19990204

L4 ANSWER 25 OF 25 MEDLINE DUPLICATE 15
ACCESSION NUMBER: 97442536 MEDLINE
DOCUMENT NUMBER: 97442536 PubMed ID: 9295274
TITLE: 25-Hydroxyvitamin D3 1alpha-hydroxylase and vitamin D synthesis.
AUTHOR: Takeyama K; Kitanaka S; Sato T; Kobori M; **Yanagisawa J**; **Kato S**
CORPORATE SOURCE: Institute of Molecular and Cellular Biosciences, University of Tokyo, Yayoi, Bunkyo-ku, Tokyo 113, Japan.
SOURCE: SCIENCE, (1997 Sep 19) 277 (5333) 1827-30.
Journal code: 0404511. ISSN: 0036-8075.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
OTHER SOURCE: GENBANK-AB005989; GENBANK-AB006034
ENTRY MONTH: 199710
ENTRY DATE: Entered STN: 19971021
Last Updated on STN: 20000303
Entered Medline: 19971009

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NEWS 18	Dec 17	Adis Clinical Trials Insight now available on STN
NEWS 19	Jan 29	Simultaneous left and right truncation added to COMPENDEX, ENERGY, INSPEC
NEWS 20	Feb 13	CANCERLIT is no longer being updated
NEWS 21	Feb 24	METADEX enhancements
NEWS 22	Feb 24	PCTGEN now available on STN
NEWS 23	Feb 24	TEMA now available on STN
NEWS 24	Feb 26	NTIS now allows simultaneous left and right truncation
NEWS 25	Feb 26	PCTFULL now contains images
NEWS 26	Mar 04	SDI PACKAGE for monthly delivery of multifile SDI results
NEWS 27	Mar 20	EVENTLINE will be removed from STN
NEWS 28	Mar 24	PATDPAFULL now available on STN
NEWS 29	Mar 24	Additional information for trade-named substances without structures available in REGISTRY
NEWS 30	Apr 11	Display formats in DGENE enhanced
NEWS 31	Apr 14	MEDLINE Reload
NEWS 32	Apr 17	Polymer searching in REGISTRY enhanced
NEWS 33	Apr 21	Indexing from 1947 to 1956 being added to records in CA/CAPLUS
NEWS 34	Apr 21	New current-awareness alert (SDI) frequency in WPIDS/WPINDEX/WPIX
NEWS 35	Apr 28	RDISCLOSURE now available on STN
NEWS 36	May 05	Pharmacokinetic information and systematic chemical names added to PHAR
NEWS 37	May 15	MEDLINE file segment of TOXCENTER reloaded
NEWS 38	May 15	Supporter information for ENCOMPPAT and ENCOMPLIT updated
NEWS 39	May 16	CHEMREACT will be removed from STN
NEWS 40	May 19	Simultaneous left and right truncation added to WSCA
NEWS 41	May 19	RAPRA enhanced with new search field, simultaneous left and right truncation

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=> s kato shigeaki /au
L1          482 KATO SHIGEAKI

=> s yanagisawa jun /au
L2           16 YANAGISAWA JUN

=> s l1 and l2
L3           11 L1 AND L2

=> dup rem l3
PROCESSING COMPLETED FOR L3
L4             8 DUP REM L3 (3 DUPLICATES REMOVED)

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L4   ANSWER 1 OF 8     MEDLINE                              DUPLICATE 1
ACCESSION NUMBER:    2002463177     MEDLINE
DOCUMENT NUMBER:     22194406   PubMed ID: 12107188
TITLE:               TATA-binding protein-free TAF-containing complex (TFTC) and
                     p300 are both required for efficient transcriptional
                     activation.
AUTHOR:              Hardy Sara; Brand Marjorie; Mittler Gerhard;
                     Yanagisawa Jun; Kato Shigeaki;
                     Meisterernst Michael; Tora Laszlo
```

CORPORATE SOURCE: Institut de Genetique et de Biologie Moleculaire et Cellulaire, UMR 7104, Department of Transcriptional and Post-transcriptional Control of Gene Regulation, Communaute Urbaine de Strasbourg, France.
SOURCE: JOURNAL OF BIOLOGICAL CHEMISTRY, (2002 Sep 6) 277 (36) 32875-82.
Journal code: 2985121R. ISSN: 0021-9258.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 200210
ENTRY DATE: Entered STN: 20020912
Last Updated on STN: 20030105
Entered Medline: 20021029

L4 ANSWER 2 OF 8 CAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 2002:314068 CAPLUS
DOCUMENT NUMBER: 137:289416
TITLE: Molecular mechanism of regulation of nuclear receptor transcriptional activity
AUTHOR(S): **Yanagisawa, Jun; Kato, Shigeaki**
CORPORATE SOURCE: Institute of Molecular and Cellular Biosciences, University of Tokyo, Japan
SOURCE: Molecular Medicine (Tokyo, Japan) (2002), 39(3), 254-262
CODEN: MOLMEL; ISSN: 0918-6557
PUBLISHER: Nakayama Shoten
DOCUMENT TYPE: Journal; General Review
LANGUAGE: Japanese

L4 ANSWER 3 OF 8 CAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 2002:262583 CAPLUS
DOCUMENT NUMBER: 136:274403
TITLE: Molecular mechanisms underlying the action of environmental endocrine-disrupting chemicals
AUTHOR(S): Nawata, Hajime; Goto, Kiminobu; Morinaga, Hidetaka; Yanase, Toshihiko; **Yanagisawa, Jun**; **Kato, Shigeaki**; Nomura, Masatoshi; Okabe, Taijiro; Takayanagi, Ryoichi
CORPORATE SOURCE: CREST, JST, Japan
SOURCE: Environmental Sciences (Tokyo, Japan) (2002), 9(1), 57-70
CODEN: ESCIE6; ISSN: 0915-955X
PUBLISHER: MYU K.K.
DOCUMENT TYPE: Journal; General Review
LANGUAGE: English
REFERENCE COUNT: 7 THERE ARE 7 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L4 ANSWER 4 OF 8 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC.
ACCESSION NUMBER: 2001:457094 BIOSIS
DOCUMENT NUMBER: PREV200100457094
TITLE: Method of screening for pharmaceuticals by detecting cross talk between intracellular signals and intranuclear receptors.
AUTHOR(S): **Kato, Shigeaki; Yanagisawa, Jun**
CORPORATE SOURCE: Saitama Japan
ASSIGNEE: Chugai Seiyaku Kabushiki Kaisha, Tokyo, Japan
PATENT INFORMATION: US 6268157 July 31, 2001
SOURCE: Official Gazette of the United States Patent and Trademark Office Patents, (July 31, 2001) Vol. 1248, No. 5, pp. No Pagination. e-file.
ISSN: 0098-1133.

DOCUMENT TYPE: Patent
LANGUAGE: English

L4 ANSWER 5 OF 8 CAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 2000:591590 CAPLUS
DOCUMENT NUMBER: 133:359265
TITLE: Vitamin D and TGF-.beta.
AUTHOR(S): Yanagi, Yasuo; **Yanagisawa, Jun**; **Kato, Shigeaki**
CORPORATE SOURCE: Institute of Molecular and cellular Biosciences, University of Tokyo, Tokyo, 113-0032, Japan
SOURCE: Naibunpi, Tonyobyoka (2000), 10(4), 357-365
CODEN: NATOFF; ISSN: 1341-3724
PUBLISHER: Kagaku Hyoronsha
DOCUMENT TYPE: Journal; General Review
LANGUAGE: Japanese

L4 ANSWER 6 OF 8 CAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 2000:201404 CAPLUS
DOCUMENT NUMBER: 133:69011
TITLE: Molecular mechanism of ligand-induced transactivation function of nuclear receptors
AUTHOR(S): **Yanagisawa, Jun**; Watanabe, Michiko; Kobayashi, Yoko; **Kato, Shigeaki**
CORPORATE SOURCE: Institue of Molecular and Cellular Biosciences, University of Tokyo, Japan
SOURCE: Jikken Igaku (2000), 18(2), 229-234
CODEN: JIIGEF; ISSN: 0288-5514
PUBLISHER: Yodosha
DOCUMENT TYPE: Journal; General Review
LANGUAGE: Japanese

L4 ANSWER 7 OF 8 CAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 1998:687135 CAPLUS
DOCUMENT NUMBER: 130:76646
TITLE: Co-activators and co-repressors for nuclear receptors
AUTHOR(S): **Yanagisawa, Jun**; Masuhiro, Yoshikazu; **Kato, Shigeaki**
CORPORATE SOURCE: Molecular Cells Biology Laboratory, University of Tokyo, Japan
SOURCE: Igaku no Ayumi (1998), 186(10), 657-662
CODEN: IGAYAY; ISSN: 0039-2359
PUBLISHER: Ishiyaku Shuppan
DOCUMENT TYPE: Journal; General Review
LANGUAGE: Japanese

L4 ANSWER 8 OF 8 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC.DUPLICATE 2
ACCESSION NUMBER: 1999:71820 BIOSIS
DOCUMENT NUMBER: PREV199900071820
TITLE: Role of p300, a transcriptional coactivator, in signalling of TGF-beta.
AUTHOR(S): Nishihara, Ayako; Hanai, Jun-Ichi; Okamoto, Nobuaki; **Yanagisawa, Jun**; **Kato, Shigeaki**; Miyazono, Kohei; Kawabata, Masahiro (1)
CORPORATE SOURCE: (1) Dep. Biochem., Cancer Inst., Japanese Found. Cancer Res., 1-37-1 Kami-Ikebukuro, Toshima-ku, Tokyo 170-8455 Japan
SOURCE: Genes to Cells, (Sept., 1998) Vol. 3, No. 9, pp. 613-623. ISSN: 1356-9597.
DOCUMENT TYPE: Article
LANGUAGE: English

=> s smad (p) transcriptio? (p) factor

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L5        2545 SMAD (P) TRANSCRIPTIO? (P) FACTOR

=> s smad (s) transcriptio? (s) factor
L6        2124 SMAD (S) TRANSCRIPTIO? (S) FACTOR

=> s smad (s) coactivat?
L7         145 SMAD (S) COACTIVAT?

=> s smad (s) coactivat? (s) p300
L8          74 SMAD (S) COACTIVAT? (S) P300

=> dup rem l8
PROCESSING COMPLETED FOR L8
L9          29 DUP REM L8 (45 DUPLICATES REMOVED)

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L9   ANSWER 1 OF 29     MEDLINE                          DUPLICATE 1
ACCESSION NUMBER:   2003221346     IN-PROCESS
DOCUMENT NUMBER:    22627838   PubMed ID: 12743039
TITLE:              Regulation of Smad signaling through a differential
                    recruitment of coactivators and corepressors by ZEB
                    proteins.
AUTHOR:             Postigo Antonio A; Depp Jennifer L; Taylor Jennifer J;
                    Kroll Kristen L
CORPORATE SOURCE:   Division of Molecular Oncology, Department of Internal
                    Medicine and Department of Molecular Biology and
                    Pharmacology, Washington University School of Medicine, St
                    Louis, MO 63110, USA Corresponding author e-mail:.
                    apostigo@im.wustl.edu
SOURCE:             EMBO JOURNAL, (2003 May 15) 22 (10) 2453-62.
                    Journal code: 8208664. ISSN: 0261-4189.
PUB. COUNTRY:       England: United Kingdom
DOCUMENT TYPE:      Journal; Article; (JOURNAL ARTICLE)
LANGUAGE:           English
FILE SEGMENT:       IN-PROCESS; NONINDEXED; Priority Journals
ENTRY DATE:         Entered STN: 20030514
                    Last Updated on STN: 20030514
AB   . . . represses it. Here we report that these antagonistic effects by
     the ZEB proteins arise from the differential recruitment of
     transcriptional coactivators (p300 and P/CAF) and
     corepressors (CtBP) to the Smads. Thus, while ZEB-1/deltaEF1
     binds to p300 and promotes the formation of a p300-Smad transcriptional
     complex, ZEB-2/SIP1 acts as a repressor. . .

L9   ANSWER 2 OF 29  BIOSIS  COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC.DUPLICATE
     2
ACCESSION NUMBER:   2003:185274  BIOSIS
DOCUMENT NUMBER:    PREV200300185274
TITLE:              Synthetic triterpenoids enhance transforming growth factor
                    beta/Smad signaling.
AUTHOR(S):          Suh, Nanjoo; Roberts, Anita B.; Reffey, Stephanie Birkey;
                    Miyazono, Kohei; Itoh, Susumu; ten Dijke, Peter; Heiss,
                    Elke H.; Place, Andrew E.; Risingsong, Renee; Williams,
                    Charlotte R.; Honda, Tadashi; Gribble, Gordon W.; Sporn,
                    Michael B. (1)
CORPORATE SOURCE:   (1) Department of Pharmacology, Dartmouth Medical School,
                    Hanover, NH, 03755, USA: michael.sporn@dartmouth.edu USA
SOURCE:             Cancer Research, (March 15 2003) Vol. 63, No. 6, pp.
                    1371-1376. print.
                    ISSN: 0008-5472.
DOCUMENT TYPE:      Article
LANGUAGE:           English
AB.  . . the effects of two new synthetic triterpenoids, 2-cyano-3,12-
```

dioxooleana-1,9-dien-28-oic acid (CDDO) and its derivative, 1-(2-cyano-3,12-dioxooleana-1,9-dien-28-oyl) imidazole (CDDO-Im), on transforming growth factor (TGF)-beta/**Smad** signaling. These agents, at nanomolar concentrations, increase the expression of TGF-beta-dependent genes, such as those for plasminogen activator inhibitor 1. . . regard. They prolong the activation of Smad2 induced by TGF-beta and markedly enhance the ability of Smad3 to activate a **Smad** binding element, CAGA-luciferase. In transfection assays, they reverse the inhibitory effects of Smad7. CDDO and CDDO-Im also enhance **Smad** signaling in the pathways of two other members of the TGF-beta superfamily, namely, activin and bone morphogenetic protein. Finally, these triterpenoids induce expression of the transcriptional **coactivator p300**-CBP-associated factor and synergize with TGF-beta in this regard. These are the first studies to report enhancement of **Smad** signaling by synthetic triterpenoids and should further their optimal use for applications in prevention or treatment of diseases in which. . .

L9 ANSWER 3 OF 29 MEDLINE DUPLICATE 3
ACCESSION NUMBER: 2002406906 MEDLINE
DOCUMENT NUMBER: 22151107 PubMed ID: 12034730
TITLE: c-Jun associates with the oncoprotein Ski and suppresses Smad2 transcriptional activity.
AUTHOR: Pessah Marcia; Marais Jacqueline; Prunier Celine; Ferrand Nathalie; Lallemand Francois; Mauviel Alain; Atfi Azeddine
CORPORATE SOURCE: INSERM U 482, Hopital Saint-Antoine, 184 Rue du Faubourg Saint-Antoine, 75571, Paris Cedex 12, France.
SOURCE: JOURNAL OF BIOLOGICAL CHEMISTRY, (2002 Aug 9) 277 (32) 29094-100.
Journal code: 2985121R. ISSN: 0021-9258.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 200209
ENTRY DATE: Entered STN: 20020806
Last Updated on STN: 20030105
Entered Medline: 20020909
AB The Smad proteins are key intracellular effectors of transforming growth factor-beta (TGF-beta) cytokines. The ability of **Smads** to modulate transcription results from a functional cooperativity with the **coactivators p300**/cAMP-response element-binding protein-binding protein (CBP), or the corepressors TGIF and Ski. The c-Jun N-terminal kinase (JNK) pathway, another downstream target activated. . .

L9 ANSWER 4 OF 29 MEDLINE DUPLICATE 4
ACCESSION NUMBER: 2002721269 MEDLINE
DOCUMENT NUMBER: 22371567 PubMed ID: 12483531
TITLE: MdmX inhibits Smad transactivation.
AUTHOR: Kadakia Madhavi; Brown Thomas L; McGorry Molly M; Berberich Steven J
CORPORATE SOURCE: Department of Biochemistry and Molecular Biology, Wright State University, Dayton, Ohio, USA.
CONTRACT NUMBER: CA64430 (NCI)
SOURCE: ONCOGENE, (2002 Dec 12) 21 (57) 8776-85.
Journal code: 8711562. ISSN: 0950-9232.
PUB. COUNTRY: England: United Kingdom
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 200301
ENTRY DATE: Entered STN: 20021218
Last Updated on STN: 20030124

Entered Medline: 20030123

AB . . . demonstrate that MdmX binds to p300 as well as Smad3 and Smad4. Taken together, these results suggest that inhibition of **Smad** -induced transactivation by MdmX occurs by altering **Smad** interaction with its **coactivator p300**.

L9 ANSWER 5 OF 29 CAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 2002:482573 CAPLUS
DOCUMENT NUMBER: 137:242988
TITLE: Repression of Smad2 and Smad3 transactivating activity by association with a novel splice variant of CCAAT-binding factor C subunit
AUTHOR(S): Chen, Feifei; Ogawa, Kenji; Liu, Xubao; Stringfield, Teresa M.; Chen, Yan
CORPORATE SOURCE: Department of Medical and Molecular Genetics and the Walther Oncology Center, Indiana University School of Medicine, Indianapolis, IN, 46202, USA
SOURCE: Biochemical Journal (2002), 364(2), 571-577
CODEN: BIJOAK; ISSN: 0264-6021
PUBLISHER: Portland Press Ltd.
DOCUMENT TYPE: Journal
LANGUAGE: English
REFERENCE COUNT: 34 THERE ARE 34 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

IT Transcription factors
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(**p300**; repression of Smad2 and Smad3 transactivating activity by assocn. with novel splice variant of CBF subunit C (Cb), data suggest assocn. prevents **Smads** from interacting with general transcriptional **coactivators**, such as **p300**)

L9 ANSWER 6 OF 29 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC.DUPLICATE 5
ACCESSION NUMBER: 2002:572549 BIOSIS
DOCUMENT NUMBER: PREV200200572549
TITLE: Control of Smad7 stability by competition between acetylation and ubiquitination.
AUTHOR(S): Gronroos, Eva; Hellman, Ulf; Heldin, Carl-Henrik; Ericsson, Johan (1)
CORPORATE SOURCE: (1) Ludwig Institute for Cancer Research, Husargatan 3, S-751 24, Box 595, Uppsala: johan.ericsson@licr.uu.se Sweden
SOURCE: Molecular Cell, (September, 2002) Vol. 10, No. 3, pp. 483-493. http://www.molecule.org/. print.
ISSN: 1097-2765.
DOCUMENT TYPE: Article
LANGUAGE: English
AB **Smad** proteins regulate gene expression in response to TGFbeta signaling. Here we present evidence that Smad7 interacts with the transcriptional **coactivator p300**, resulting in acetylation of Smad7 on two lysine residues in its N terminus. Acetylation or mutation of these lysine residues. . .

L9 ANSWER 7 OF 29 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC.DUPLICATE 6
ACCESSION NUMBER: 2001:245590 BIOSIS
DOCUMENT NUMBER: PREV200100245590
TITLE: Antagonistic regulation of type I collagen gene expression by interferon-gamma and transforming growth factor-beta: Integration at the level of p300/CBP transcriptional coactivators.
AUTHOR(S): Ghosh, Asish K.; Yuan, Weihua; Mori, Yasuji; Chen, Shu-jen; Varga, John (1)
CORPORATE SOURCE: (1) Section of Rheumatology, University of Illinois Chicago

College of Medicine, 900 S. Ashland Ave., 1158 Molecular Biology Research Bldg., Chicago, IL, 60607: jvarga@uic.edu USA

SOURCE: Journal of Biological Chemistry, (April 6, 2001) Vol. 276, No. 14, pp. 11041-11048. print.
ISSN: 0021-9258.
DOCUMENT TYPE: Article
LANGUAGE: English
SUMMARY LANGUAGE: English

AB. . . . have shown previously that in normal skin fibroblasts, TGF-beta positively regulates alpha2(I) procollagen gene (COL1A2) promoter activity through the cellular **Smad** signal transduction pathway. In contrast, IFN-gamma activates Stat1alpha, down-regulates COL1A2 transcription, and abrogates its stimulation induced by TGF-beta. The level. . . . pathways mediating antagonistic collagen regulation is unknown. We now report that IFN-gamma abrogates TGF-beta-stimulated COL1A2 transcription in fibroblasts by inhibiting **Smad** activities. IFN-gamma appears to induce competition between activated Stat1alpha and Smad3 for interaction with limiting amounts of cellular **p300** /CBP. Overexpression of **p300** restored COL1A2 stimulation by TGF-beta in the presence of IFN-gamma, and potentiated IFN-gamma-dependent positive transcriptional responses. In contrast to fibroblasts,. . . . Jak1 and consequently unable to activate Stat1alpha-mediated responses, IFN-gamma failed to repress TGF-beta-induced transcription. These results indicate that as essential **coactivators** for both Smad3 and Stat1alpha, nuclear **p300**/CBP integrate signals that positively or negatively regulate COL1A2 transcription. The findings implicate a novel mechanism to account for antagonistic interaction of **Smad** and Jak-Stat pathways in regulation of target genes. In fibroblasts responding to cytokines with opposing effects on collagen transcription, the relative levels of cellular **coactivators**, and their interaction with regulated transcription factors, may govern the net effect.

L9 ANSWER 8 OF 29 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC.DUPLICATE 7

ACCESSION NUMBER: 2001:324463 BIOSIS
DOCUMENT NUMBER: PREV200100324463
TITLE: c-Jun interacts with the corepressor TG-interacting factor (TGIF) to suppress Smad2 transcriptional activity.
AUTHOR(S): Pessah, Marcia; Prunier, Celine; Marais, Jacqueline; Ferrand, Nathalie; Mazars, Anne; Lallemand, Francois; Gauthier, Jean-Michel; Atfi, Azeddine (1)
CORPORATE SOURCE: (1) Institut National de la Sante et de la Recherche Medicale U 482, Hopital Saint-Antoine, 184 Rue du Faubourg Saint-Antoine, 75571, Paris Cedex 12: atfi@adr.st-antoine.inserm.fr France
SOURCE: Proceedings of the National Academy of Sciences of the United States of America, (May 22, 2001) Vol. 98, No. 11, pp. 6198-6203. print.
ISSN: 0027-8424.
DOCUMENT TYPE: Article
LANGUAGE: English
SUMMARY LANGUAGE: English

AB The Sma and Mad related (**Smad**) family proteins are critical mediators of the transforming growth factor-beta (TGF-beta) superfamily signaling. After TGF-beta-mediated phosphorylation and association with Smad4,. . . . association of Smad2 with the nuclear transcriptional corepressor TG-interacting factor (TGIF), thereby interfering with the assembly of Smad2 and the **coactivator p300** in response to TGF-beta signaling. Interestingly, c-Jun directly binds to the nuclear transcriptional corepressor TGIF and is required for TGIF-mediated. . .

L9 ANSWER 9 OF 29 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC.DUPLICATE

8
ACCESSION NUMBER: 2001:277145 BIOSIS
DOCUMENT NUMBER: PREV200100277145
TITLE: Ligand-dependent degradation of Smad3 by a ubiquitin ligase complex of ROC1 and associated proteins.
AUTHOR(S): Fukuchi, Minoru; Imamura, Takeshi; Chiba, Tomoki; Ebisawa, Takanori; Kawabata, Masahiro; Tanaka, Keiji; Miyazono, Kohei (1)
CORPORATE SOURCE: (1) Department of Biochemistry, Research for the Future Program, Cancer Institute of Japanese Foundation for Cancer Research, Japan Society for the Promotion of Science, 1-37-1 Kami-ikebukuro, Toshima-ku, Tokyo, 170-8455: miyazono-ind@umin.ac.jp Japan
SOURCE: Molecular Biology of the Cell, (May, 2001) Vol. 12, No. 5, pp. 1431-1443. print.
ISSN: 1059-1524.
DOCUMENT TYPE: Article
LANGUAGE: English
SUMMARY LANGUAGE: English
AB **Smads** are signal mediators for the members of the transforming growth factor-beta (TGF-beta) superfamily. Upon phosphorylation by the TGF-beta receptors, Smad3 translocates into the nucleus, recruits transcriptional **coactivators** and corepressors, and regulates transcription of target genes. Here, we show that Smad3 activated by TGF-beta is degraded by the. . . complex ROC1-SCFFbw1a consisting of ROC1, Skp1, Cullin1, and Fbw1a (also termed betaTrCP1) induces ubiquitination of Smad3. Recruitment of a transcriptional **coactivator**, **p300**, to nuclear Smad3 facilitates the interaction with the E3 ligase complex and triggers the degradation process of Smad3. Smad3 bound. . .

L9 ANSWER 10 OF 29 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC.
ACCESSION NUMBER: 2002:198839 BIOSIS
DOCUMENT NUMBER: PREV200200198839
TITLE: SMIF, a novel Smad4-interacting protein acts as a crucial transcriptional co-activator in TGF-beta signalling.
AUTHOR(S): Bai, Renyuan (1); Ouyang, Tao (1); Hammerschmidt, Mathias; Saenger, Jana (1); Koester, Christina; Hahn, Stephan A.; Peschel, Christian (1); Duyster, Justus (1)
CORPORATE SOURCE: (1) Department of Internal Medicine III, Technical University of Munich, Munich Germany
SOURCE: Blood, (November 16, 2001) Vol. 98, No. 11 Part 1, pp. 284a. http://www.bloodjournal.org/. print.
Meeting Info.: 43rd Annual Meeting of the American Society of Hematology, Part 1 Orlando, Florida, USA December 07-11, 2001
ISSN: 0006-4971.
DOCUMENT TYPE: Conference
LANGUAGE: English
AB. . . TGF-beta superfamily proteins regulate diverse cellular responses including cell growth and differentiation, and carry decisive functions in tumour suppression. Hereby **Smad** proteins play a central role in transducing signals from receptors to the nucleus. Upon TGF-beta stimulation, the receptor-associated **Smads** (R-**Smads**) are phosphorylated and form a complex with the common mediator Smad4/DPC4. The complex then translocates to the nucleus where it. . . activate transcription together with co-factors. Here we report the cloning and characterization of a novel, ubiquitously expressed specific Smad4-interacting transcriptional **coactivator**, SMIF (Smad4-interacting transcription factor). We cloned the human and murine cDNA of SMIF and identified homologues in zerbrafish and Drosophila. SMIF forms a complex with Smad4 but not with others **Smad** proteins and translocates to the nucleus in TGFbeta/BMP4-inducible and Smad4-dependent manner, revealed by Immunofluorescence and cellular fractionation studies.

We demonstrate. . . endogenous SMIF with Smad4. SMIF possesses strong intrinsic TGFbeta-inducible transcriptional activity, which depends on Smad4 in mammalian cells and requires **p300**/CBP. The interacting sequence of Smad4 with SMIF was mapped to the C-terminus of the linker region of Smad4. A point. . .

L9 ANSWER 11 OF 29 MEDLINE DUPLICATE 9
ACCESSION NUMBER: 2001151841 MEDLINE
DOCUMENT NUMBER: 21099866 PubMed ID: 11165238
TITLE: Signaling crosstalk underlying synergistic induction of astrocyte differentiation by BMPs and IL-6 family of cytokines.
AUTHOR: Yanagisawa M; Nakashima K; Takizawa T; Ochiai W; Arakawa H; Taga T
CORPORATE SOURCE: Department of Cell Fate Modulation, Institute of Molecular Embryology and Genetics, Kumamoto University, Honjo, Japan.
SOURCE: FEBS LETTERS, (2001 Feb 2) 489 (2-3) 139-43.
Journal code: 0155157. ISSN: 0014-5793.
PUB. COUNTRY: Netherlands
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 200103
ENTRY DATE: Entered STN: 20010404
Last Updated on STN: 20010404
Entered Medline: 20010315
AB . . . differentiation from neuroepithelial cells as assessed by expression of glial fibrillary acidic protein (GFAP). In this synergistic action, transcription factors, **Smads** and STAT3 (for signal transducer and activator of transcription 3) activated by respective group of cytokines, as well as a transcriptional **coactivator p300** were essential. Taken together with our previous finding that the synergistic astrocyte induction by BMP2 and LIF is attributed to. . .

L9 ANSWER 12 OF 29 MEDLINE DUPLICATE 10
ACCESSION NUMBER: 2001082674 MEDLINE
DOCUMENT NUMBER: 20538397 PubMed ID: 10973958
TITLE: Transforming growth factor-beta 1 inhibition of macrophage activation is mediated via Smad3.
AUTHOR: Werner F; Jain M K; Feinberg M W; Sibinga N E; Pellacani A; Wiesel P; Chin M T; Topper J N; Perrella M A; Lee M E
CORPORATE SOURCE: Program of Developmental Cardiovascular Biology, Harvard Medical School, Brigham and Women's Hospital, Boston, Massachusetts 02115, USA.
CONTRACT NUMBER: HL03194 (NHLBI)
HL03274 (NHLBI)
HL03747 (NHLBI)
+
SOURCE: JOURNAL OF BIOLOGICAL CHEMISTRY, (2000 Nov 24) 275 (47) 36653-8.
Journal code: 2985121R. ISSN: 0021-9258.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 200101
ENTRY DATE: Entered STN: 20010322
Last Updated on STN: 20010322
Entered Medline: 20010108
AB . . . residue required for DNA binding in the MH-1 of Smad3 (R74A) resulted in the loss of inhibition. Transient overexpression of **p300**, an interactor of the **Smad** MH-2 domain, partially alleviated the inhibition by TGF-beta1/Smad3, suggesting that inhibition

of gene expression may be due to increased competition for limiting amounts of this **coactivator**. Our results have implications for the understanding of gene suppression by TGF-beta1 and for the regulation of activated macrophages by. . .

L9 ANSWER 13 OF 29 MEDLINE DUPLICATE 11
ACCESSION NUMBER: 2000187604 MEDLINE
DOCUMENT NUMBER: 20187604 PubMed ID: 10722728
TITLE: The MSG1 non-DNA-binding transactivator binds to the **p300**/CBP **coactivators**, enhancing their functional link to the **Smad** transcription factors.
AUTHOR: Yahata T; de Caestecker M P; Lechleider R J; Andriole S; Roberts A B; Isselbacher K J; Shioda T
CORPORATE SOURCE: Laboratory of Tumor Biology, Massachusetts General Hospital Cancer Center, Massachusetts General Hospital-East, Charlestown, Massachusetts 02129, USA.
CONTRACT NUMBER: R01 CA82230 (NCI)
SOURCE: JOURNAL OF BIOLOGICAL CHEMISTRY, (2000 Mar 24) 275 (12) 8825-34.
Journal code: 2985121R. ISSN: 0021-9258.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 200004
ENTRY DATE: Entered STN: 20000505
Last Updated on STN: 20000505
Entered Medline: 20000427
TI The MSG1 non-DNA-binding transactivator binds to the **p300**/CBP **coactivators**, enhancing their functional link to the **Smad** transcription factors.
AB . . . hetero-oligomerization. However, the mechanism of this MSG1 effect has been unknown. We now show that MSG1 directly binds to the **p300**/cAMP-response element-binding protein-binding protein (CBP) transcriptional **coactivators**, which in turn bind to the **Smads**, and enhances **Smad**-mediated transcription in a manner dependent on **p300**/CBP. The C-terminal transactivating domain of MSG1 is required for binding to p300/CBP and enhancement of Smad-mediated transcription; the viral VP16. . . MSG1 to p300/CBP and enhancement of Smad-mediated transcription by MSG1. These results indicate that MSG1 interacts with both the DNA-binding **Smad** proteins and the **p300**/CBP **coactivators** through its N- and C-terminal regions, respectively, and enhances the functional link between **Smads** and **p300**/CBP.

L9 ANSWER 14 OF 29 CAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 2000:897036 CAPLUS
DOCUMENT NUMBER: 134:51915
TITLE: The transcriptional co-activator P/CAF potentiates TGF-.beta./smad signaling
AUTHOR(S): Itoh, Susumu; Ericsson, Johan; Nishikawa, Jun-Ichi; Heldin, Carl-Henrik; Ten Dijke, Peter
CORPORATE SOURCE: Division of Cellular Biochemistry, The Netherlands Cancer Institute, Amsterdam, 1066 CX, Neth.
SOURCE: Nucleic Acids Research (2000), 28(21), 4291-4298
CODEN: NARHAD; ISSN: 0305-1048
PUBLISHER: Oxford University Press
DOCUMENT TYPE: Journal
LANGUAGE: English
REFERENCE COUNT: 53 THERE ARE 53 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT
IT Transcription factors
RL: BAC (Biological activity or effector, except adverse); BPR (Biological

process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
(P/CAF (**p300**/CBP-assocd. factor); transcriptional **coactivator** P/CAF potentiation of TGF-.beta./**Smad** signaling and mechanisms therein)

IT Transcription factors
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
(**p300**; transcriptional **coactivator** P/CAF potentiation of TGF-.beta./**Smad** signaling and mechanisms therein)

L9 ANSWER 15 OF 29 MEDLINE DUPLICATE 12
ACCESSION NUMBER: 2000406732 MEDLINE
DOCUMENT NUMBER: 20379360 PubMed ID: 10918613
TITLE: **Smad**-dependent stimulation of type I collagen gene expression in human skin fibroblasts by TGF-beta involves functional cooperation with **p300**/CBP transcriptional **coactivators**.
AUTHOR: Ghosh A K; Yuan W; Mori Y; Varga J
CORPORATE SOURCE: Section of Rheumatology, University of Illinois at Chicago College of Medicine, Chicago, Illinois 60607, USA.
CONTRACT NUMBER: AR-42309 (NIAMS)
AR-46390 (NIAMS)
SOURCE: ONCOGENE, (2000 Jul 20) 19 (31) 3546-55.
Journal code: 8711562. ISSN: 0950-9232.
PUB. COUNTRY: ENGLAND: United Kingdom
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 200008
ENTRY DATE: Entered STN: 20000901
Last Updated on STN: 20000901
Entered Medline: 20000824

TI **Smad**-dependent stimulation of type I collagen gene expression in human skin fibroblasts by TGF-beta involves functional cooperation with **p300**/CBP transcriptional **coactivators**.

AB . . . COL1A2 were transactivated by p300 in the presence of TGF-beta. These results indicate, for the first time, that the multifunctional **p300**/CBP **coactivators** play a major role in **Smad** -dependent TGF-beta stimulation of collagen gene expression in fibroblasts. Oncogene (2000) 19, 3546 - 3555

L9 ANSWER 16 OF 29 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC.DUPLICATE 13
ACCESSION NUMBER: 2000:334670 BIOSIS
DOCUMENT NUMBER: PREV200000334670
TITLE: A novel Smad nuclear interacting protein, SNIP1, suppresses p300-dependent TGF-beta signal transduction.
AUTHOR(S): Kim, Richard H.; Wang, David; Tsang, Michael; Martin, Jennifer; Huff, Carla; de Caestecker, Mark P.; Parks, W. Tony; Meng, Xianwang; Lechleider, Robert J.; Wang, Tongwen; Roberts, Anita B. (1)
CORPORATE SOURCE: (1) Laboratory of Molecular Genetics, National Institute of Child Health and Human Development, Bethesda, MD, 20892 USA
SOURCE: Genes & Development, (July 1, 2000) Vol. 14, No. 13, pp. 1605-1616. print.
ISSN: 0890-9369.
DOCUMENT TYPE: Article
LANGUAGE: English
SUMMARY LANGUAGE: English

AB. . . growth factor-beta superfamily play critical roles in controlling cell growth and differentiation. Effects of TGF-beta family ligands are mediated by **Smad** proteins. To understand the mechanism of

Smad function, we sought to identify novel interactors of **Smads** by use of a yeast two-hybrid system. A 396-amino acid nuclear protein termed SNIP1 was cloned and shown to harbor. . . well as in mammalian overexpression systems. However, the amino terminus of SNIP1 harbors binding sites for both Smad4 and the **coactivator** CBP/**p300**. Interaction between endogenous levels of SNIP1 and Smad4 or CBP/**p300** is detected in NMuMg cells as well as in vitro. Overexpression of full-length SNIP1 or its amino terminus is sufficient to inhibit multiple gene responses to TGF-beta and CBP/**p300**, as well as the formation of a Smad4/**p300** complex. Studies in Xenopus laevis further suggest that SNIP1 plays a role in regulating dorsomedial mesoderm formation by the TGF-beta family member nodal. Thus, SNIP1 is a nuclear inhibitor of CBP/**p300** and its level of expression in specific cell types has important physiological consequences by setting a threshold for TGF-beta-induced transcriptional activation involving CBP/**p300**.

L9 ANSWER 17 OF 29 CAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 2000:538567 CAPLUS
DOCUMENT NUMBER: 133:317588
TITLE: Nuclear fusion of LIF and BMP2 signaling pathway by transcriptional coactivator, p300
AUTHOR(S): Nakashima, Kinichi; Yanagisawa, Makoto; Taga, Tetsuya
CORPORATE SOURCE: Department of Molecular Cell Biology, Medical Research Institute, Tokyo Medical and Dental University, Japan
SOURCE: Jikken Igaku (2000), 18(10), 1379-1383
CODEN: JIIGEF; ISSN: 0288-5514
PUBLISHER: Yodosha
DOCUMENT TYPE: Journal; General Review
LANGUAGE: Japanese
AB A review with 21 refs., on mechanism of LIF and BMP2 signal transduction; synergism between LIF and BMP2 in astrocyte differentiation induction; transcription factors STAT3 and **Smad** in LIF and BMP2 synergism; transcriptional **coactivator p300**-mediated STAT3 and **Smad** complex formation; and biol. significances of signal crosstalk between LIF and BMP2.

L9 ANSWER 18 OF 29 EMBASE COPYRIGHT 2003 ELSEVIER SCI. B.V.
ACCESSION NUMBER: 2000220989 EMBASE
TITLE: Repression of transforming-growth-factor-.beta.-mediated transcription by nuclear factor .kappa.B.
AUTHOR: Nagarajan R.P.; Chen F.; Li W.; Vig E.; Harrington M.A.; Nakshatri H.; Chen Y.
CORPORATE SOURCE: Y. Chen, Walther Oncology Center, Indiana Univ. School Medicine, Indianapolis, IN 46202, United States. ychen3@iupui.edu
SOURCE: Biochemical Journal, (15 Jun 2000) 348/3 (591-596).
Refs: 39
ISSN: 0264-6021 CODEN: BIJOAK
COUNTRY: United Kingdom
DOCUMENT TYPE: Journal; Article
FILE SEGMENT: 026 Immunology, Serology and Transplantation
029 Clinical Biochemistry
LANGUAGE: English
SUMMARY LANGUAGE: English
AB . . . . inhibit TGF-.beta. and activin signalling in a negative-feedback loop, mediated by a direct regulation by Smad3 and Smad4 via a **Smad**-binding element (SBE) in the Smad7 promoter. Interestingly, we found that the Smad7 promoter was also regulated by nuclear factor .kappa.B. . . In human hepatoma HepG2 cells, TNF-.alpha. was able to inhibit TGF-.beta.- and activin-mediated transcriptional activation. Furthermore, overexpression of the transcription **coactivator p300** could abrogate the inhibitory effect of NF-.kappa.B on the Smad7 promoter. Taken together, these data have indicated a novel mode of

crosstalk between the **Smad** and the NF-.kappa.B signalling cascades at the transcriptional level by competing for a limiting pool of transcription co-activators.

L9 ANSWER 19 OF 29 MEDLINE DUPLICATE 14
ACCESSION NUMBER: 2000054408 MEDLINE
DOCUMENT NUMBER: 20054408 PubMed ID: 10585406
TITLE: The MEK pathway is required for stimulation of p21(WAF1/CIP1) by transforming growth factor-beta.
AUTHOR: Hu P P; Shen X; Huang D; Liu Y; Counter C; Wang X F
CORPORATE SOURCE: Department of Pharmacology, Duke University Medical Center, Durham, North Carolina 27710, USA.
CONTRACT NUMBER: DK-45746 (NIDDK)
SOURCE: JOURNAL OF BIOLOGICAL CHEMISTRY, (1999 Dec 10) 274 (50) 35381-7.
Journal code: 2985121R. ISSN: 0021-9258.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 200001
ENTRY DATE: Entered STN: 20000124
Last Updated on STN: 20020420
Entered Medline: 20000113
AB . . . MAPK pathway significantly decrease p21 induction by TGF-beta. Both constitutively active MEK and inhibitors for MEK have no effect on **Smad** activity, including DNA binding, localization, and interaction with **coactivator p300**/CBP. These findings suggest that the MAPK pathway may be an.independent pathway that is involved in p21 and p15 induction. . .

L9 ANSWER 20 OF 29 MEDLINE DUPLICATE 15
ACCESSION NUMBER: 1999428552 MEDLINE
DOCUMENT NUMBER: 99428552 PubMed ID: 10497242
TITLE: E1A inhibits transforming growth factor-beta signaling through binding to Smad proteins.
AUTHOR: Nishihara A; Hanai J; Imamura T; Miyazono K; Kawabata M
CORPORATE SOURCE: Department of Biochemistry, The Cancer Institute of Japanese Foundation for Cancer Research, 1-37-1 Kami-ikebukuro, Toshima-ku, Tokyo 170-8455, Japan.
SOURCE: JOURNAL OF BIOLOGICAL CHEMISTRY, (1999 Oct 1) 274 (40) 28716-23.
Journal code: 2985121R. ISSN: 0021-9258.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 199911
ENTRY DATE: Entered STN: 20000111
Last Updated on STN: 20000111
Entered Medline: 19991102
AB . . . interact with a variety of transcription factors, and the interaction is likely to determine the target specificity of gene induction. **Smads** also associate with transcriptional **coactivators** such as **p300** and CBP. E1A, an adenoviral oncoprotein, inhibits TGF-beta-induced transactivation, and the ability of E1A to bind p300/CBP is required for. . .

L9 ANSWER 21 OF 29 CAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 1999:636317 CAPLUS
DOCUMENT NUMBER: 131:252643
TITLE: Signal transduction of TGF-.beta. superfamily by Smads
AUTHOR(S): Hanai, Junichi; Miyazono, Kohei
CORPORATE SOURCE: Dep. Biochem., The Cancer Inst., Tokyo, Japan

SOURCE: Jikken Igaku (1999), 17(14), 1744-1750
CODEN: JIIGEF; ISSN: 0288-5514
PUBLISHER: Yodosha
DOCUMENT TYPE: Journal; General Review
LANGUAGE: Japanese
AB A review, with 46 refs., on action and the role of receptors, structure and function of **Smad**, SARA (**Smad** anchor for receptor activation) recruiting R-**Smad** (receptor-regulated **Smad**), activation of R-**Smad** and movement after that, role of **Smad** in cell nucleus, i.e. (a) direct binding to DNA, (b) binding to other transcription factors, e.g. FAST1 (forkhead activin signal transducer 1), AP-1(Jun/Fos) complex, ATF-2 (CRE-BP-1), Evi-1, transcription repressors, etc., and (c) interaction with transcription **coactivators** or corepressors, e.g. **p300**/CBP, TGIF, MSG1, etc., and cross-talk among signal transduction pathways.

L9 ANSWER 22 OF 29 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC.DUPLICATE 16
ACCESSION NUMBER: 1999:235948 BIOSIS
DOCUMENT NUMBER: PREV199900235948
TITLE: Synergistic signaling in fetal brain by STAT3-Smad1 complex bridged by p300.
AUTHOR(S): Nakashima, Kinichi; Yanagisawa, Makoto; Arakawa, Hirokazu; Kimura, Naoki; Hisatsune, Tatsuhiro; Kawabata, Masahiro; Miyazono, Kohei; Taga, Tetsuya (1)
CORPORATE SOURCE: (1) Department of Molecular Cell Biology, Medical Research Institute, Tokyo Medical and Dental University, Tokyo, 101-0062 Japan
SOURCE: Science (Washington D C), (April 16, 1999) Vol. 284, No. 5413, pp. 479-482.
ISSN: 0036-8075.
DOCUMENT TYPE: Article
LANGUAGE: English
SUMMARY LANGUAGE: English
AB. . . BMP2 (bone morphogenetic protein-2) signal through different receptors and transcription factors, namely STATs (signal transducers and activators of transcription) and **Smads**. LIF and BMP2 were found to act in synergy on primary fetal neural progenitor cells to induce astrocytes. The transcriptional **coactivator p300** interacts physically with STAT3 at its amino terminus in a cytokine stimulation-independent manner, and with Smad1 at its carboxyl terminus in a cytokine stimulation-dependent manner. The formation of a complex between STAT3 and Smad1, bridged by **p300**, is involved in the cooperative signaling of LIF and BMP2 and the subsequent induction of astrocytes from neural progenitors.

L9 ANSWER 23 OF 29 MEDLINE DUPLICATE 17
ACCESSION NUMBER: 2000131857 MEDLINE
DOCUMENT NUMBER: 20131857 PubMed ID: 10667205
TITLE: Intracellular signaling of the TGF-beta superfamily by Smad proteins.
AUTHOR: Kawabata M; Imamura T; Inoue H; Hanai J; Nishihara A; Hanyu A; Takase M; Ishidou Y; Udagawa Y; Oeda E; Goto D; Yagi K; Kato M; Miyazono K
CORPORATE SOURCE: Department of Biochemistry, Cancer Institute, Japanese Foundation for Cancer Research (JFCR), Tokyo, Japan.. mkawabat-ind@umin.u-tokyo.ac.jp
SOURCE: ANNALS OF THE NEW YORK ACADEMY OF SCIENCES, (1999) 886 73-82. Ref: 32
Journal code: 7506858. ISSN: 0077-8923.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
General Review; (REVIEW)
(REVIEW, TUTORIAL)

LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 200002
ENTRY DATE: Entered STN: 20000314
Last Updated on STN: 20000314
Entered Medline: 20000229

AB . . . ligand stimulation. Both homo-oligomers and hetero-oligomers directly bind to DNA, suggesting that the signaling pathway of Smads may be multiplex. **Smads** 2 and 3 associate with transcriptional **coactivators** such as **p300** in a ligand-dependent manner, **p300** enhances transactivation by TGF-beta, suggesting that **coactivators** link **Smads** to the basal transcriptional machinery. A missense mutation of Smad2 identified in colorectal and lung cancers was introduced to Smad3.. . .

L9 ANSWER 24 OF 29 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC.DUPLICATE 18
ACCESSION NUMBER: 1999:227119 BIOSIS
DOCUMENT NUMBER: PREV199900227119
TITLE: A Smad transcriptional corepressor.
AUTHOR(S): Wotton, David; Lo, Roger S.; Lee, Susan; Massague, Joan (1)
CORPORATE SOURCE: (1) Cell Biology Program, Howard Hughes Medical Institute, Memorial Sloan-Kettering Cancer Center, New York, NY, 10021 USA
SOURCE: Cell, (April 2, 1999) Vol. 97, No. 1, pp. 29-39. ISSN: 0092-8674.
DOCUMENT TYPE: Article
LANGUAGE: English
SUMMARY LANGUAGE: English

AB. . . and association with Smad4, Smad2 moves into the nucleus, binds to target promoters in association with DNA-binding cofactors, and recruits **coactivators** such as **p300**/CBP to activate transcription. We identified the homeodomain protein TGIF as a Smad2-binding protein and a repressor of transcription. A TGFbeta-activated **Smad** complex can recruit TGIF and histone deacetylases (HDACs) to a **Smad** target promoter, repressing transcription. Thus, upon entering the nucleus, a Smad2-Smad4 complex may interact with **coactivators**, forming a transcriptional activation complex, or with TGIF and HDACs, forming a transcriptional repressor complex. Formation of one of these two mutually exclusive complexes is determined by the relative levels of **Smad** corepressors and **coactivators** within the cell.

L9 ANSWER 25 OF 29 MEDLINE DUPLICATE 19
ACCESSION NUMBER: 1998389704 MEDLINE
DOCUMENT NUMBER: 98389704 PubMed ID: 9722503
TITLE: Physical and functional interaction of SMADs and p300/CBP.
AUTHOR: Pouponnot C; Jayaraman L; Massague J
CORPORATE SOURCE: Cell Biology Program and Howard Hughes Medical Institute, Memorial Sloan-Kettering Cancer Center, New York, New York 10021, USA.
CONTRACT NUMBER: CA34610 (NCI)
SOURCE: JOURNAL OF BIOLOGICAL CHEMISTRY, (1998 Sep 4) 273 (36) 22865-8.
Journal code: 2985121R. ISSN: 0021-9258.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 199810
ENTRY DATE: Entered STN: 19981021
Last Updated on STN: 19981021
Entered Medline: 19981015

AB . . . are transforming growth factor beta (TGF-beta) receptor substrates and mediators of TGF-beta transcriptional responses. Here we

provide evidence that the **coactivators p300** and CBP interact with **Smads** 1 through 4. The biological relevance of this interaction is shown in vivo by overexpression of the adenovirus E1A protein. . .

L9 ANSWER 26 OF 29 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC.DUPLICATE 20

ACCESSION NUMBER: 1999:42633 BIOSIS
DOCUMENT NUMBER: PREV199900042633
TITLE: TGF-beta-induced phosphorylation of Smad3 regulates its interaction with coactivator p300/CREB-binding protein.
AUTHOR(S): Shen, Xing; Hu, Patrick Pei-Chih; Liberati, Nicole T.; Datto, Michael B.; Frederick, Joshua P.; Wang, Xiao-Fan (1)
CORPORATE SOURCE: (1) Dep. Pharmacology and Cancer Biol., Duke Univ. Med. Center, Durham, NC 27710 USA
SOURCE: Molecular Biology of the Cell, (Dec., 1998) Vol. 9, No. 12, pp. 3309-3319.
ISSN: 1059-1524.
DOCUMENT TYPE: Article
LANGUAGE: English

AB **Smads** are intermediate effector proteins that transduce the TGF-beta signal from the plasma membrane to the nucleus, where they participate in transactivation of downstream target genes. We have shown previously that **coactivators p300**/CREB-binding protein are involved in TGF-beta-mediated transactivation of two Cdk inhibitor genes, p21 and p15. Here we examined the possibility that **Smads** function to regulate transcription by directly interacting with **p300**/CREB-binding protein. We show that Smad3 can interact with a C-terminal fragment of **p300** in a temporal and phosphorylation-dependent manner. TGF-beta-mediated phosphorylation of Smad3 potentiates the association between Smad3 and **p300**, likely because of an induced conformational change that removes the autoinhibitory interaction between the N- and C-terminal domains of Smad3. Consistent with a role for **p300** in the transcription regulation of multiple genes, overexpression of a Smad3 C-terminal fragment causes a general squelching effect on multiple TGF-beta-responsive reporter constructs. The adenoviral oncoprotein E1A can partially block **Smad**-dependent transcriptional activation by directly competing for binding to **p300**. Taken together, these findings define a new role for phosphorylation of Smad3: in addition to facilitating complex formation with Smad4 and promoting nuclear translocation, the phosphorylation-induced conformational change of Smad3 modulates its interaction with **coactivators**, leading to transcriptional regulation.

L9 ANSWER 27 OF 29 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC.DUPLICATE 21

ACCESSION NUMBER: 1998:362124 BIOSIS
DOCUMENT NUMBER: PREV199800362124
TITLE: The tumor suppressor Smad4/DPC4 and transcriptional adaptor CBP/p300 are coactivators for Smad3 in TGF-beta-induced transcriptional activation.
AUTHOR(S): Feng, Xin-Hua; Zhang, Ying; Wu, Rui-Yun; Derynck, Rik (1)
CORPORATE SOURCE: (1) Dep. Growth and Development, Programs Cell Biol. and Developmental Biol., Univ. California, San Francisco, CA 94143-0640 USA
SOURCE: Genes & Development, (July 15, 1998) Vol. 12, No. 14, pp. 2153-2163.
ISSN: 0890-9369.
DOCUMENT TYPE: Article
LANGUAGE: English

AB **Smads** regulate transcription of defined genes in response to TGF-beta receptor activation, although the mechanisms of **Smad** -mediated transcription are not well understood. We demonstrate that the

TGF-beta-inducible Smad3 uses the tumor suppressor Smad4/DPC4 and CBP/**p300** as transcriptional **coactivators**, which associate with Smad3 in response to TGF-beta. The association of CBP with Smad3 was localized to the carboxyl terminus of Smad3, which is required for transcriptional activation, and a defined segment in CBP. Furthermore, CBP/**p300** stimulated both TGF-beta- and **Smad**-induced transcription in a Smad4/DPC4-dependent fashion. Smad3 transactivation and TGF-beta-induced transcription were inhibited by expressing EIA, which interferes with CBP functions. The **coactivator** functions and physical interactions of Smad4 and CBP/**p300** with Smad3 allow a model for the induction of gene expression in response to TGF-beta.

L9 ANSWER 28 OF 29 MEDLINE DUPLICATE 22
ACCESSION NUMBER: 1998344004 MEDLINE
DOCUMENT NUMBER: 98344004 PubMed ID: 9679056
TITLE: TGF-beta-stimulated cooperation of **smad** proteins with the **coactivators** CBP/**p300**.
AUTHOR: Janknecht R; Wells N J; Hunter T
CORPORATE SOURCE: Molecular Biology and Virology Laboratory, The Salk Institute, La Jolla, California 92037 USA.. rjanknecht@aim.salk.edu
CONTRACT NUMBER: CA14195 (NCI)
CA39780 (NCI)
SOURCE: GENES AND DEVELOPMENT, (1998 Jul 15) 12 (14) 2114-9. Journal code: 8711660. ISSN: 0890-9369.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 199808
ENTRY DATE: Entered STN: 19980903
Last Updated on STN: 19980903
Entered Medline: 19980821
TI TGF-beta-stimulated cooperation of **smad** proteins with the **coactivators** CBP/**p300**.
AB . . . stimulate gene transcription is poorly understood. We report that TGF-beta receptor phosphorylation of Smad3 promotes its interaction with the paralogous **coactivators** CBP and **p300**, whereas CBP/**p300** binding to nonphosphorylated Smad3 or its oligomerization partner Smad4 is negatively regulated by **Smad** -intramolecular interactions. Furthermore, p300 and TGF-beta receptor-phosphorylated Smad3 synergistically augment transcriptional activation. Thus, CBP/p300 are important components of activin/TGF-beta signaling and. . .

L9 ANSWER 29 OF 29 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC.DUPLICATE 23
ACCESSION NUMBER: 1999:71820 BIOSIS
DOCUMENT NUMBER: PREV199900071820
TITLE: Role of p300, a transcriptional coactivator, in signalling of TGF-beta.
AUTHOR(S): Nishihara, Ayako; Hanai, Jun-Ichi; Okamoto, Nobuaki; Yanagisawa, Jun; Kato, Shigeaki; Miyazono, Kohei; Kawabata, Masahiro (1)
CORPORATE SOURCE: (1) Dep. Biochem., Cancer Inst., Japanese Found. Cancer Res., 1-37-1 Kami-Ikebukuro, Toshima-ku, Tokyo 170-8455 Japan
SOURCE: Genes to Cells, (Sept., 1998) Vol. 3, No. 9, pp. 613-623. ISSN: 1356-9597.
DOCUMENT TYPE: Article
LANGUAGE: English
AB Background: **Smad** proteins are novel transcriptional regulators mediating the signalling of the transforming growth factor-beta (TGF-beta) superfamily. **Coactivators** such as **p300**/CBP promote

transactivation by various transcription factors through a direct interaction with them. Adenoviral oncoprotein E1A, which binds **p300**, was shown to inhibit the signalling of TGF-beta. These findings raise the possibility that **p300** may be involved in TGF-beta signalling. Results: We investigated whether **p300** is involved in transactivation by **Smads**. **p300** enhanced the **Smad**-induced transactivation of p3TP-Lux, a TGF-beta responsive reporter. E1A inhibited this enhancement, and the inhibition required its ability to bind **p300**/CBP. **p300** and Smad3, as well as Smad2, interacted in vivo in a ligand-dependent manner. The binding region in Smad3 was its C-terminal half that was previously shown to possess an intrinsic transactivation activity. The binding region in **p300** was mapped to its C-terminal 678 amino acids. The minimal Smad2/3-interacting region, as well as the rest of the **p300**, inhibited the transactivation of p3TP-Lux in a dominant-negative fashion. Conclusion: **p300** interacted with Smad2 and Smad3 in a ligand-dependent manner, and enhanced the transactivation by **Smads**. Our results present the molecular basis of the transactivation by **Smad** proteins.

```
=> d his

     (FILE 'HOME' ENTERED AT 14:50:48 ON 27 MAY 2003)

     FILE 'MEDLINE, BIOSIS, EMBASE, CAPLUS' ENTERED AT 14:51:06 ON 27 MAY 2003
L1           482 S KATO SHIGEAKI /AU
L2            16 S YANAGISAWA JUN /AU
L3            11 S L1 AND L2
L4             8 DUP REM L3 (3 DUPLICATES REMOVED)
L5          2545 S SMAD (P) TRANSCRIPTIO? (P) FACTOR
L6          2124 S SMAD (S) TRANSCRIPTIO? (S) FACTOR
L7           145 S SMAD (S) COACTIVAT?
L8            74 S SMAD (S) COACTIVAT? (S) P300
L9            29 DUP REM L8 (45 DUPLICATES REMOVED)

=> s (smad (s) coactivat?) (p) screen?
L10            0 (SMAD (S) COACTIVAT?) (P) SCREEN?

=> s (smad (s) coactivat?) (p) assay?
L11           11 (SMAD (S) COACTIVAT?) (P) ASSAY?

=> dup rem l11
PROCESSING COMPLETED FOR L11
L12            4 DUP REM L11 (7 DUPLICATES REMOVED)

=> d l12 total ibib kwic

L12  ANSWER 1 OF 4  BIOSIS  COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC.DUPLICATE 1
ACCESSION NUMBER:   2003:185274  BIOSIS
DOCUMENT NUMBER:    PREV200300185274
TITLE:              Synthetic triterpenoids enhance transforming growth factor
                    beta/Smad signaling.
AUTHOR(S):          Suh, Nanjoo; Roberts, Anita B.; Reffey, Stephanie Birkey;
                    Miyazono, Kohei; Itoh, Susumu; ten Dijke, Peter; Heiss,
                    Elke H.; Place, Andrew E.; Risingsong, Renee; Williams,
                    Charlotte R.; Honda, Tadashi; Gribble, Gordon W.; Sporn,
                    Michael B. (1)
CORPORATE SOURCE:   (1) Department of Pharmacology, Dartmouth Medical School,
                    Hanover, NH, 03755, USA: michael.sporn@dartmouth.edu USA
SOURCE:             Cancer Research, (March 15 2003) Vol. 63, No. 6, pp.
                    1371-1376. print.
                    ISSN: 0008-5472.
DOCUMENT TYPE:      Article
```

LANGUAGE: English

AB. . . . the effects of two new synthetic triterpenoids, 2-cyano-3,12-dioxooleana-1,9-dien-28-oic acid (CDDO) and its derivative, 1-(2-cyano-3,12-dioxooleana-1,9-dien-28-oyl) imidazole (CDDO-Im), on transforming growth factor (TGF)-beta/**Smad** signaling. These agents, at nanomolar concentrations, increase the expression of TGF-beta-dependent genes, such as those for plasminogen activator inhibitor 1. . . . regard. They prolong the activation of Smad2 induced by TGF-beta and markedly enhance the ability of Smad3 to activate a **Smad** binding element, CAGA-luciferase. In transfection **assays**, they reverse the inhibitory effects of Smad7. CDDO and CDDO-Im also enhance **Smad** signaling in the pathways of two other members of the TGF-beta superfamily, namely, activin and bone morphogenetic protein. Finally, these triterpenoids induce expression of the transcriptional **coactivator** p300-CBP-associated factor and synergize with TGF-beta in this regard. These are the first studies to report enhancement of **Smad** signaling by synthetic triterpenoids and should further their optimal use for applications in prevention or treatment of diseases in which. . .

L12 ANSWER 2 OF 4 MEDLINE DUPLICATE 2
ACCESSION NUMBER: 2003118670 IN-PROCESS
DOCUMENT NUMBER: 22519463 PubMed ID: 12631740
TITLE: Mechanism of a Transcriptional Cross Talk between Transforming Growth Factor-beta-regulated Smad3 and Smad4 Proteins and Orphan Nuclear Receptor Hepatocyte Nuclear Factor-4.
AUTHOR: Chou Wan-Chih; Prokova Vassiliki; Shiraishi Keiko; Valcourt Ulrich; Moustakas Aristidis; Hadzopoulou-Cladaras Margarita; Zannis Vassilis I; Kardassis Dimitris
CORPORATE SOURCE: Department of Basic Sciences, University of Crete Medical School and Institute of Molecular Biology and Biotechnology, Foundation of Research and Technology of Hellas, Heraklion GR-71110, Greece.
SOURCE: MOLECULAR BIOLOGY OF THE CELL, (2003 Mar) 14 (3) 1279-94. Journal code: 9201390. ISSN: 1059-1524.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: IN-PROCESS; NONINDEXED; Priority Journals
ENTRY DATE: Entered STN: 20030313
Last Updated on STN: 20030313

AB . . . the specific promoter context and did not require an intact beta-hairpin/DNA binding domain of the Smads. Using glutathione S-transferase interaction **assays**, we established that two regions of HNF-4, the N-terminal activation function 1 (AF-1) domain (aa 1-24) and the C-terminal F. . . proteins via the AF-1 and the adjacent DNA binding domain, whereas a single tyrosine to alanine substitution in AF-1 abolished **coactivation** by **Smads**. The findings suggest that the transcriptional cross talk between the TGFbeta-regulated Smads and HNF-4 is mediated by specific functional domains. . .

L12 ANSWER 3 OF 4 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC.
ACCESSION NUMBER: 2002:198839 BIOSIS
DOCUMENT NUMBER: PREV200200198839
TITLE: SMIF, a novel Smad4-interacting protein acts as a crucial transcriptional co-activator in TGF-beta signalling.
AUTHOR(S): Bai, Renyuan (1); Ouyang, Tao (1); Hammerschmidt, Mathias; Saenger, Jana (1); Koester, Christina; Hahn, Stephan A.; Peschel, Christian (1); Duyster, Justus (1)
CORPORATE SOURCE: (1) Department of Internal Medicine III, Technical University of Munich, Munich Germany
SOURCE: Blood, (November 16, 2001) Vol. 98, No. 11 Part 1, pp. 284a. http://www.bloodjournal.org/. print.

Meeting Info.: 43rd Annual Meeting of the American Society of Hematology, Part 1 Orlando, Florida, USA December 07-11, 2001
ISSN: 0006-4971.
DOCUMENT TYPE: Conference
LANGUAGE: English
AB. . . TGF-beta superfamily proteins regulate diverse cellular responses including cell growth and differentiation, and carry decisive functions in tumour suppression. Hereby **Smad** proteins play a central role in transducing signals from receptors to the nucleus. Upon TGF-beta stimulation, the receptor-associated **Smads** (R-**Smads**) are phosphorylated and form a complex with the common mediator Smad4/DPC4. The complex then translocates to the nucleus where it. . . activate transcription together with co-factors. Here we report the cloning and characterization of a novel, ubiquitously expressed specific Smad4-interacting transcriptional **coactivator**, SMIF (Smad4-interacting transcription factor). We cloned the human and murine cDNA of SMIF and identified homologues in zerbrafish and Drosophila. SMIF forms a complex with Smad4 but not with others **Smad** proteins and translocates to the nucleus in TGFbeta/BMP4-inducible and Smad4-dependent manner, revealed by Immunofluorescence and cellular fractionation studies. We demonstrate. . . in this region abolished binding to SMIF in vitro and in vivo. This construct lost transcriptional activity in Ga14 transcription **assay** and is impaired in activating the ARE-lux luciferase construct. Overexpression of wildtype SMIF enhances, while a dominant-negative SMIF construct lacking. . .

L12 ANSWER 4 OF 4 MEDLINE DUPLICATE 3
ACCESSION NUMBER: 2001082674 MEDLINE
DOCUMENT NUMBER: 20538397 PubMed ID: 10973958
TITLE: Transforming growth factor-beta 1 inhibition of macrophage activation is mediated via Smad3.
AUTHOR: Werner F; Jain M K; Feinberg M W; Sibinga N E; Pellacani A; Wiesel P; Chin M T; Topper J N; Perrella M A; Lee M E
CORPORATE SOURCE: Program of Developmental Cardiovascular Biology, Harvard Medical School, Brigham and Women's Hospital, Boston, Massachusetts 02115, USA.
CONTRACT NUMBER: HL03194 (NHLBI)
HL03274 (NHLBI)
HL03747 (NHLBI)
+
SOURCE: JOURNAL OF BIOLOGICAL CHEMISTRY, (2000 Nov 24) 275 (47) 36653-8.
Journal code: 2985121R. ISSN: 0021-9258.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 200101
ENTRY DATE: Entered STN: 20010322
Last Updated on STN: 20010322
Entered Medline: 20010108
AB . . . to inhibit expression of markers of macrophage activation (inducible nitric-oxide synthase and matrix metalloproteinase-12) following lipopolysaccharide treatment in gene reporter **assays**. Transient and constitutive overexpression of a dominant negative Smad3 opposed the inhibitory effect of TGF-beta1. Domain swapping experiments suggest that. . . in the MH-1 of Smad3 (R74A) resulted in the loss of inhibition. Transient overexpression of p300, an interactor of the **Smad** MH-2 domain, partially alleviated the inhibition by TGF-beta1/Smad3, suggesting that inhibition of gene expression may be due to increased competition for limiting amounts of this **coactivator** . Our results have implications for the understanding of gene suppression by TGF-beta1 and for the regulation of activated macrophages by. . .

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=> d his

     (FILE 'HOME' ENTERED AT 14:50:48 ON 27 MAY 2003)

     FILE 'MEDLINE, BIOSIS, EMBASE, CAPLUS' ENTERED AT 14:51:06 ON 27 MAY 2003
L1          482 S KATO SHIGEAKI /AU
L2           16 S YANAGISAWA JUN /AU
L3           11 S L1 AND L2
L4            8 DUP REM L3 (3 DUPLICATES REMOVED)
L5         2545 S SMAD (P) TRANSCRIPTIO? (P) FACTOR
L6         2124 S SMAD (S) TRANSCRIPTIO? (S) FACTOR
L7          145 S SMAD (S) COACTIVAT?
L8           74 S SMAD (S) COACTIVAT? (S) P300
L9           29 DUP REM L8 (45 DUPLICATES REMOVED)
L10           0 S (SMAD (S) COACTIVAT?) (P) SCREEN?
L11          11 S (SMAD (S) COACTIVAT?) (P) ASSAY?
L12           4 DUP REM L11 (7 DUPLICATES REMOVED)

=> s smad (s) coactivat? (s) cbp
L13          52 SMAD (S) COACTIVAT? (S) CBP

=> dup rem l13
PROCESSING COMPLETED FOR L13
L14          19 DUP REM L13 (33 DUPLICATES REMOVED)

=> d l14 total ibib kwic

L14  ANSWER 1 OF 19  BIOSIS  COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC.DUPLICATE
     1
ACCESSION NUMBER:    2003:185274  BIOSIS
DOCUMENT NUMBER:     PREV200300185274
TITLE:               Synthetic triterpenoids enhance transforming growth factor
                     beta/Smad signaling.
AUTHOR(S):           Suh, Nanjoo; Roberts, Anita B.; Reffey, Stephanie Birkey;
                     Miyazono, Kohei; Itoh, Susumu; ten Dijke, Peter; Heiss,
                     Elke H.; Place, Andrew E.; Risingsong, Renee; Williams,
                     Charlotte R.; Honda, Tadashi; Gribble, Gordon W.; Sporn,
                     Michael B. (1)
CORPORATE SOURCE:    (1) Department of Pharmacology, Dartmouth Medical School,
                     Hanover, NH, 03755, USA: michael.sporn@dartmouth.edu USA
SOURCE:              Cancer Research, (March 15 2003) Vol. 63, No. 6, pp.
                     1371-1376. print.
                     ISSN: 0008-5472.
DOCUMENT TYPE:       Article
LANGUAGE:            English
AB.  . . the effects of two new synthetic triterpenoids, 2-cyano-3,12-
     dioxooleana-1,9-dien-28-oic acid (CDDO) and its derivative,
     1-(2-cyano-3,12-dioxooleana-1,9-dien-28-oyl) imidazole (CDDO-Im), on
     transforming growth factor (TGF)-beta/Smad signaling. These
     agents, at nanomolar concentrations, increase the expression of
     TGF-beta-dependent genes, such as those for plasminogen activator
     inhibitor 1. . . regard. They prolong the activation of Smad2 induced
     by TGF-beta and markedly enhance the ability of Smad3 to activate a
     Smad binding element, CAGA-luciferase. In transfection assays,
     they reverse the inhibitory effects of Smad7. CDDO and CDDO-Im also
     enhance Smad signaling in the pathways of two other members of
     the TGF-beta superfamily, namely, activin and bone morphogenetic protein.
     Finally, these triterpenoids induce expression of the transcriptional
     coactivator p300-CBP-associated factor and synergize
     with TGF-beta in this regard. These are the first studies to report
     enhancement of Smad signaling by synthetic triterpenoids and
     should further their optimal use for applications in prevention or.
```

treatment of diseases in which. . .

L14 ANSWER 2 OF 19 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC.DUPLICATE 2

ACCESSION NUMBER: 2003:114554 BIOSIS
DOCUMENT NUMBER: PREV200300114554
TITLE: Nuclear convergence of the TGFbeta and cAMP signal transduction pathways in murine embryonic palate mesenchymal cells.
AUTHOR(S): Warner, D. R. (1); Pisano, M. M.; Greene, R. M.
CORPORATE SOURCE: (1) Birth Defects Center, Department of Molecular, Cellular, and Craniofacial Biology, School of Dentistry, University of Louisville, 501 South Preston Street, Suite 301, Louisville, KY, 40292, USA: drwarn01@gwise.louisville.edu USA
SOURCE: Cellular Signalling, (February 2003, 2003) Vol. 15, No. 2, pp. 235-242. print.
ISSN: 0898-6568.
DOCUMENT TYPE: Article
LANGUAGE: English

AB. . . have examined nuclear convergence of these signalling pathways at the level of transcriptional complex formation. Biotinylated oligonucleotides encoding a consensus **Smad** binding element (SBE), or a cyclic AMP response element (CRE), were mixed with cell extracts from murine embryonic palate mesenchymal. . . TGFbeta treatment of MEPM cells increased the levels of phosphorylated Smad2, phosphorylated cAMP response element binding protein (CREB), and the **coactivator**, CREB binding protein (**CBP**), that were part of a complex bound to the SBE. Treatment of cells with forskolin, a stimulator of adenylate cyclase, increased the amount of phosphorylated CREB and **CBP**, but not the amount of phosphorylated Smad2 bound in a complex to the SBE. Additionally, the presence of the co-repressors,. . . increased in response to either TGFbeta or forskolin. These results demonstrate that phosphorylated CREB forms a complex with the co-activator **CBP**, phosphorylated Smad2 and the co-repressors c-Ski and SnoN on a consensus SBE. This suggests cooperative regulation of genes with SBE-containing. . .

L14 ANSWER 3 OF 19 MEDLINE DUPLICATE 3

ACCESSION NUMBER: 2002406906 MEDLINE
DOCUMENT NUMBER: 22151107 PubMed ID: 12034730
TITLE: c-Jun associates with the oncoprotein Ski and suppresses Smad2 transcriptional activity.
AUTHOR: Pessah Marcia; Marais Jacqueline; Prunier Celine; Ferrand Nathalie; Lallemand Francois; Mauviel Alain; Atfi Azeddine
CORPORATE SOURCE: INSERM U 482, Hopital Saint-Antoine, 184 Rue du Faubourg Saint-Antoine, 75571, Paris Cedex 12, France.
SOURCE: JOURNAL OF BIOLOGICAL CHEMISTRY, (2002 Aug 9) 277 (32) 29094-100.
Journal code: 2985121R. ISSN: 0021-9258.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 200209
ENTRY DATE: Entered STN: 20020806
Last Updated on STN: 20030105
Entered Medline: 20020909

AB The Smad proteins are key intracellular effectors of transforming growth factor-beta (TGF-beta) cytokines. The ability of **Smads** to modulate transcription results from a functional cooperativity with the **coactivators** p300/cAMP-response element-binding protein-binding protein (**CBP**), or the corepressors TGIF and Ski. The c-Jun N-terminal kinase (JNK) pathway, another downstream target activated by

TGF-beta receptors, has. . .

L14 ANSWER 4 OF 19 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC.DUPLICATE 4

ACCESSION NUMBER: 2001:245590 BIOSIS
DOCUMENT NUMBER: PREV200100245590
TITLE: Antagonistic regulation of type I collagen gene expression by interferon-gamma and transforming growth factor-beta: Integration at the level of p300/CBP transcriptional coactivators.
AUTHOR(S): Ghosh, Asish K.; Yuan, Weihua; Mori, Yasuji; Chen, Shu-jen; Varga, John (1)
CORPORATE SOURCE: (1) Section of Rheumatology, University of Illinois Chicago College of Medicine, 900 S. Ashland Ave., 1158 Molecular Biology Research Bldg., Chicago, IL, 60607: jvarga@uic.edu USA
SOURCE: Journal of Biological Chemistry, (April 6, 2001) Vol. 276, No. 14, pp. 11041-11048. print.
ISSN: 0021-9258.
DOCUMENT TYPE: Article
LANGUAGE: English
SUMMARY LANGUAGE: English

AB. . . have shown previously that in normal skin fibroblasts, TGF-beta positively regulates alpha2(I) procollagen gene (COL1A2) promoter activity through the cellular **Smad** signal transduction pathway. In contrast, IFN-gamma activates Stat1alpha, down-regulates COL1A2 transcription, and abrogates its stimulation induced by TGF-beta. The level. . . pathways mediating antagonistic collagen regulation is unknown. We now report that IFN-gamma abrogates TGF-beta-stimulated COL1A2 transcription in fibroblasts by inhibiting **Smad** activities. IFN-gamma appears to induce competition between activated Stat1alpha and Smad3 for interaction with limiting amounts of cellular p300/**CBP** . Overexpression of p300 restored COL1A2 stimulation by TGF-beta in the presence of IFN-gamma, and potentiated IFN-gamma-dependent positive transcriptional responses. In. . . Jak1 and consequently unable to activate Stat1alpha-mediated responses, IFN-gamma failed to repress TGF-beta-induced transcription. These results indicate that as essential **coactivators** for both Smad3 and Stat1alpha, nuclear p300/**CBP** integrate signals that positively or negatively regulate COL1A2 transcription. The findings implicate a novel mechanism to account for antagonistic interaction of **Smad** and Jak-Stat pathways in regulation of target genes. In fibroblasts responding to cytokines with opposing effects on collagen transcription, the relative levels of cellular **coactivators**, and their interaction with regulated transcription factors, may govern the net effect.

L14 ANSWER 5 OF 19 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC.

ACCESSION NUMBER: 2002:198839 BIOSIS
DOCUMENT NUMBER: PREV200200198839
TITLE: SMIF, a novel Smad4-interacting protein acts as a crucial transcriptional co-activator in TGF-beta signalling.
AUTHOR(S): Bai, Renyuan (1); Ouyang, Tao (1); Hammerschmidt, Mathias; Saenger, Jana (1); Koester, Christina; Hahn, Stephan A.; Peschel, Christian (1); Duyster, Justus (1)
CORPORATE SOURCE: (1) Department of Internal Medicine III, Technical University of Munich, Munich Germany
SOURCE: Blood, (November 16, 2001) Vol. 98, No. 11 Part 1, pp. 284a. http://www.bloodjournal.org/. print.
Meeting Info.: 43rd Annual Meeting of the American Society of Hematology, Part 1 Orlando, Florida, USA December 07-11, 2001
ISSN: 0006-4971.
DOCUMENT TYPE: Conference
LANGUAGE: English

AB. . . TGF-beta superfamily proteins regulate diverse cellular responses including cell growth and differentiation, and carry decisive functions in tumour suppression. Hereby **Smad** proteins play a central role in transducing signals from receptors to the nucleus. Upon TGF-beta stimulation, the receptor-associated **Smads** (R-**Smads**) are phosphorylated and form a complex with the common mediator Smad4/DPC4. The complex then translocates to the nucleus where it. . . activate transcription together with co-factors. Here we report the cloning and characterization of a novel, ubiquitously expressed specific Smad4-interacting transcriptional **coactivator**, SMIF (Smad4-interacting transcription factor). We cloned the human and murine cDNA of SMIF and identified homologues in zerbrafish and Drosophila. SMIF forms a complex with Smad4 but not with others **Smad** proteins and translocates to the nucleus in TGFbeta/BMP4-inducible and Smad4-dependent manner, revealed by Immunofluorescence and cellular fractionation studies. We demonstrate. . . endogenous SMIF with Smad4. SMIF possesses strong intrinsic TGFbeta-inducible transcriptional activity, which depends on Smad4 in mammalian cells and requires p300/**CBP**. The interacting sequence of Smad4 with SMIF was mapped to the C-terminus of the linker region of Smad4. A point. . .

L14 ANSWER 6 OF 19 MEDLINE DUPLICATE 5
ACCESSION NUMBER: 2000187604 MEDLINE
DOCUMENT NUMBER: 20187604 PubMed ID: 10722728
TITLE: The MSG1 non-DNA-binding transactivator binds to the p300/**CBP coactivators**, enhancing their functional link to the **Smad** transcription factors.
AUTHOR: Yahata T; de Caestecker M P; Lechleider R J; Andriole S; Roberts A B; Isselbacher K J; Shioda T
CORPORATE SOURCE: Laboratory of Tumor Biology, Massachusetts General Hospital Cancer Center, Massachusetts General Hospital-East, Charlestown, Massachusetts 02129, USA.
CONTRACT NUMBER: R01 CA82230 (NCI)
SOURCE: JOURNAL OF BIOLOGICAL CHEMISTRY, (2000 Mar 24) 275 (12) 8825-34.
Journal code: 2985121R. ISSN: 0021-9258.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 200004
ENTRY DATE: Entered STN: 20000505
Last Updated on STN: 20000505
Entered Medline: 20000427

TI The MSG1 non-DNA-binding transactivator binds to the p300/**CBP coactivators**, enhancing their functional link to the **Smad** transcription factors.

AB . . . of this MSG1 effect has been unknown. We now show that MSG1 directly binds to the p300/cAMP-response element-binding protein-binding protein (**CBP**) transcriptional **coactivators**, which in turn bind to the **Smads**, and enhances **Smad**-mediated transcription in a manner dependent on p300/**CBP**. The C-terminal transactivating domain of MSG1 is required for binding to p300/CBP and enhancement of Smad-mediated transcription; the viral VP16. . . MSG1 to p300/CBP and enhancement of Smad-mediated transcription by MSG1. These results indicate that MSG1 interacts with both the DNA-binding **Smad** proteins and the p300/**CBP coactivators** through its N- and C-terminal regions, respectively, and enhances the functional link between **Smads** and p300/**CBP**.

L14 ANSWER 7 OF 19 CAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 2000:897036 CAPLUS
DOCUMENT NUMBER: 134:51915

TITLE: The transcriptional co-activator P/CAF potentiates TGF-.beta./smad signaling
AUTHOR(S): Itoh, Susumu; Ericsson, Johan; Nishikawa, Jun-Ichi; Heldin, Carl-Henrik; Ten Dijke, Peter
CORPORATE SOURCE: Division of Cellular Biochemistry, The Netherlands Cancer Institute, Amsterdam, 1066 CX, Neth.
SOURCE: Nucleic Acids Research (2000), 28(21), 4291-4298
CODEN: NARHAD; ISSN: 0305-1048
PUBLISHER: Oxford University Press
DOCUMENT TYPE: Journal
LANGUAGE: English
REFERENCE COUNT: 53 THERE ARE 53 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

IT Transcription factors
RL: BAC (Biological activity or effector, except adverse); BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
(P/CAF (p300/**CBP**-assocd. factor); transcriptional **coactivator** P/CAF potentiation of TGF-.beta./**Smad** signaling and mechanisms therein)

L14 ANSWER 8 OF 19 MEDLINE DUPLICATE 6
ACCESSION NUMBER: 2000406732 MEDLINE
DOCUMENT NUMBER: 20379360 PubMed ID: 10918613
TITLE: **Smad**-dependent stimulation of type I collagen gene expression in human skin fibroblasts by TGF-beta involves functional cooperation with p300/**CBP** transcriptional **coactivators**.
AUTHOR: Ghosh A K; Yuan W; Mori Y; Varga J
CORPORATE SOURCE: Section of Rheumatology, University of Illinois at Chicago College of Medicine, Chicago, Illinois 60607, USA.
CONTRACT NUMBER: AR-42309 (NIAMS)
AR-46390 (NIAMS)
SOURCE: ONCOGENE, (2000 Jul 20) 19 (31) 3546-55.
Journal code: 8711562. ISSN: 0950-9232.
PUB. COUNTRY: ENGLAND: United Kingdom
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 200008
ENTRY DATE: Entered STN: 20000901
Last Updated on STN: 20000901
Entered Medline: 20000824

TI **Smad**-dependent stimulation of type I collagen gene expression in human skin fibroblasts by TGF-beta involves functional cooperation with p300/**CBP** transcriptional **coactivators**.

AB . . . COL1A2 were transactivated by p300 in the presence of TGF-beta. These results indicate, for the first time, that the multifunctional p300/**CBP coactivators** play a major role in **Smad** -dependent TGF-beta stimulation of collagen gene expression in fibroblasts. Oncogene (2000) 19, 3546 - 3555

L14 ANSWER 9 OF 19 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC.DUPLICATE 7
ACCESSION NUMBER: 2000:334670 BIOSIS
DOCUMENT NUMBER: PREV200000334670
TITLE: A novel Smad nuclear interacting protein, SNIP1, suppresses p300-dependent TGF-beta signal transduction.
AUTHOR(S): Kim, Richard H.; Wang, David; Tsang, Michael; Martin, Jennifer; Huff, Carla; de Caestecker, Mark P.; Parks, W. Tony; Meng, Xianwang; Lechleider, Robert J.; Wang, Tongwen; Roberts, Anita B. (1)
CORPORATE SOURCE: (1) Laboratory of Molecular Genetics, National Institute of Child Health and Human Development, Bethesda, MD, 20892 USA

SOURCE: Genes & Development, (July 1, 2000) Vol. 14, No. 13, pp. 1605-1616. print.
ISSN: 0890-9369.
DOCUMENT TYPE: Article
LANGUAGE: English
SUMMARY LANGUAGE: English
AB. . . . growth factor-beta superfamily play critical roles in controlling cell growth and differentiation. Effects of TGF-beta family ligands are mediated by **Smad** proteins. To understand the mechanism of **Smad** function, we sought to identify novel interactors of **Smads** by use of a yeast two-hybrid system. A 396-amino acid nuclear protein termed SNIP1 was cloned and shown to harbor. . . . well as in mammalian overexpression systems. However, the amino terminus of SNIP1 harbors binding sites for both Smad4 and the **coactivator** **CBP**/p300. Interaction between endogenous levels of SNIP1 and Smad4 or **CBP**/p300 is detected in NMuMg cells as well as in vitro. Overexpression of full-length SNIP1 or its amino terminus is sufficient to inhibit multiple gene responses to TGF-beta and **CBP**/p300, as well as the formation of a Smad4/p300 complex. Studies in Xenopus laevis further suggest that SNIP1 plays a role in regulating dorsomedial mesoderm formation by the TGF-beta family member nodal. Thus, SNIP1 is a nuclear inhibitor of **CBP**/p300 and its level of expression in specific cell types has important physiological consequences by setting a threshold for TGF-beta-induced transcriptional activation involving **CBP** /p300.

L14 ANSWER 10 OF 19 MEDLINE DUPLICATE 8
ACCESSION NUMBER: 2000459104 MEDLINE
DOCUMENT NUMBER: 20432257 PubMed ID: 10974035
TITLE: Inhibition of E-selectin gene expression by transforming growth factor beta in endothelial cells involves coactivator integration of Smad and nuclear factor kappaB-mediated signals.
AUTHOR: DiChiara M R; Kiely J M; Gimbrone M A Jr; Lee M E; Perrella M A; Topper J N
CORPORATE SOURCE: Cardiovascular Division, Department of Medicine, Stanford University School of Medicine, Stanford, California 94305, USA.
CONTRACT NUMBER: P01-HL36028 (NHLBI)
RO1-HL62823-01 (NHLBI)
SOURCE: JOURNAL OF EXPERIMENTAL MEDICINE, (2000 Sep 4) 192 (5) 695-704.
Journal code: 2985109R. ISSN: 0022-1007.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 200009
ENTRY DATE: Entered STN: 20001005
Last Updated on STN: 20001005
Entered Medline: 20000928
AB . . . proteins, a class of intracellular signaling proteins involved in mediating the cellular effects of TGF-beta(1). Furthermore, we demonstrate that these **Smad**-mediated effects in endothelial cells result from a novel competitive interaction between **Smad** proteins activated by TGF-beta(1) and nuclear factor kappaB (NFkappaB) proteins activated by inflammatory stimuli (such as cytokines or bacterial lipopolysaccharide) that is mediated by the transcriptional **coactivator** cyclic AMP response element-binding protein (CREB)-binding protein (**CBP**). Augmentation of the limited amount of CBP present in endothelial cells (via overexpression) or selective disruption of Smad-CBP interactions (via. . .

L14 ANSWER 11 OF 19 MEDLINE DUPLICATE 9

ACCESSION NUMBER: 2000054408 MEDLINE
DOCUMENT NUMBER: 20054408 PubMed ID: 10585406
TITLE: The MEK pathway is required for stimulation of p21(WAF1/CIP1) by transforming growth factor-beta.
AUTHOR: Hu P P; Shen X; Huang D; Liu Y; Counter C; Wang X F
CORPORATE SOURCE: Department of Pharmacology, Duke University Medical Center, Durham, North Carolina 27710, USA.
CONTRACT NUMBER: DK-45746 (NIDDK)
SOURCE: JOURNAL OF BIOLOGICAL CHEMISTRY, (1999 Dec 10) 274 (50) 35381-7.
Journal code: 2985121R. ISSN: 0021-9258.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 200001
ENTRY DATE: Entered STN: 20000124
Last Updated on STN: 20020420
Entered Medline: 20000113

AB . . . MAPK pathway significantly decrease p21 induction by TGF-beta. Both constitutively active MEK and inhibitors for MEK have no effect on **Smad** activity, including DNA binding, localization, and interaction with **coactivator** p300/**CBP**. These findings suggest that the MAPK pathway may be an independent pathway that is involved in p21 and p15 induction. . .

L14 ANSWER 12 OF 19 MEDLINE DUPLICATE 10
ACCESSION NUMBER: 1999428552 MEDLINE
DOCUMENT NUMBER: 99428552 PubMed ID: 10497242
TITLE: E1A inhibits transforming growth factor-beta signaling through binding to Smad proteins.
AUTHOR: Nishihara A; Hanai J; Imamura T; Miyazono K; Kawabata M
CORPORATE SOURCE: Department of Biochemistry, The Cancer Institute of Japanese Foundation for Cancer Research, 1-37-1 Kami-ikebukuro, Toshima-ku, Tokyo 170-8455, Japan.
SOURCE: JOURNAL OF BIOLOGICAL CHEMISTRY, (1999 Oct 1) 274 (40) 28716-23.
Journal code: 2985121R. ISSN: 0021-9258.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 199911
ENTRY DATE: Entered STN: 20000111
Last Updated on STN: 20000111
Entered Medline: 19991102

AB . . . interact with a variety of transcription factors, and the interaction is likely to determine the target specificity of gene induction. **Smads** also associate with transcriptional **coactivators** such as p300 and **CBP**. E1A, an adenoviral oncoprotein, inhibits TGF-beta-induced transactivation, and the ability of E1A to bind p300/CBP is required for the inhibition.. . .

L14 ANSWER 13 OF 19 CAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 1999:636317 CAPLUS
DOCUMENT NUMBER: 131:252643
TITLE: Signal transduction of TGF-.beta. superfamily by Smads
AUTHOR(S): Hanai, Junichi; Miyazono, Kohei
CORPORATE SOURCE: Dep. Biochem., The Cancer Inst., Tokyo, Japan
SOURCE: Jikken Igaku (1999), 17(14), 1744-1750
CODEN: JIIGEF; ISSN: 0288-5514
PUBLISHER: Yodosha
DOCUMENT TYPE: Journal; General Review
LANGUAGE: Japanese

AB A review, with 46 refs., on action and the role of receptors, structure and function of **Smad**, SARA (**Smad** anchor for receptor activation) recruiting R-**Smad** (receptor-regulated **Smad**), activation of R-**Smad** and movement after that, role of **Smad** in cell nucleus, i.e. (a) direct binding to DNA, (b) binding to other transcription factors, e.g. FAST1 (forkhead activin signal transducer 1), AP-1(Jun/Fos) complex, ATF-2 (CRE-BP-1), Evi-1, transcription repressors, etc., and (c) interaction with transcription **coactivators** or corepressors, e.g. p300/**CBP**, TGIF, MSG1, etc., and cross-talk among signal transduction pathways.

L14 ANSWER 14 OF 19 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC.DUPLICATE 11
ACCESSION NUMBER: 1999:227119 BIOSIS
DOCUMENT NUMBER: PREV199900227119
TITLE: A Smad transcriptional corepressor.
AUTHOR(S): Wotton, David; Lo, Roger S.; Lee, Susan; Massague, Joan (1)
CORPORATE SOURCE: (1) Cell Biology Program, Howard Hughes Medical Institute, Memorial Sloan-Kettering Cancer Center, New York, NY, 10021 USA
SOURCE: Cell, (April 2, 1999) Vol. 97, No. 1, pp. 29-39. ISSN: 0092-8674.
DOCUMENT TYPE: Article
LANGUAGE: English
SUMMARY LANGUAGE: English
AB. . . and association with Smad4, Smad2 moves into the nucleus, binds to target promoters in association with DNA-binding cofactors, and recruits **coactivators** such as p300/**CBP** to activate transcription. We identified the homeodomain protein TGIF as a Smad2-binding protein and a repressor of transcription. A TGFbeta-activated **Smad** complex can recruit TGIF and histone deacetylases (HDACs) to a **Smad** target promoter, repressing transcription. Thus, upon entering the nucleus, a Smad2-Smad4 complex may interact with **coactivators**, forming a transcriptional activation complex, or with TGIF and HDACs, forming a transcriptional repressor complex. Formation of one of these two mutually exclusive complexes is determined by the relative levels of **Smad** corepressors and **coactivators** within the cell.

L14 ANSWER 15 OF 19 MEDLINE DUPLICATE 12
ACCESSION NUMBER: 1998389704 MEDLINE
DOCUMENT NUMBER: 98389704 PubMed ID: 9722503
TITLE: Physical and functional interaction of SMADs and p300/CBP.
AUTHOR: Pouponnot C; Jayaraman L; Massague J
CORPORATE SOURCE: Cell Biology Program and Howard Hughes Medical Institute, Memorial Sloan-Kettering Cancer Center, New York, New York 10021, USA.
CONTRACT NUMBER: CA34610 (NCI)
SOURCE: JOURNAL OF BIOLOGICAL CHEMISTRY, (1998 Sep 4) 273 (36) 22865-8. Journal code: 2985121R. ISSN: 0021-9258.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 199810
ENTRY DATE: Entered STN: 19981021
Last Updated on STN: 19981021
Entered Medline: 19981015
AB . . . are transforming growth factor beta (TGF-beta) receptor substrates and mediators of TGF-beta transcriptional responses. Here we provide evidence that the **coactivators** p300 and **CBP** interact with **Smads** 1 through 4. The biological relevance of this interaction is shown in vivo by overexpression of the adenovirus E1A protein. . .

L14 ANSWER 16 OF 19 MEDLINE DUPLICATE 13
ACCESSION NUMBER: 1998356187 MEDLINE
DOCUMENT NUMBER: 98356187 PubMed ID: 9689110
TITLE: CREB binding protein is a required coactivator for Smad-dependent, transforming growth factor beta transcriptional responses in endothelial cells.
COMMENT: Erratum in: Ptov Natl Acad Sci U S A 1998 Oct 13;95(21):12735
AUTHOR: Topper J N; DiChiara M R; Brown J D; Williams A J; Falb D; Collins T; Gimbrone M A Jr
CORPORATE SOURCE: Vascular Research Division, Department of Pathology, Brigham and Women's Hospital, Harvard Medical School, Boston, MA 02115, USA.. JTopper@leland.stanford.edu
CONTRACT NUMBER: P01-HL-36028 (NHLBI)
P50-HL56985 (NHLBI)
R37-HL-51150 (NHLBI)
SOURCE: PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES OF THE UNITED STATES OF AMERICA, (1998 Aug 4) 95 (16) 9506-11. Journal code: 7505876. ISSN: 0027-8424.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 199809
ENTRY DATE: Entered STN: 19980917
Last Updated on STN: 20000303
Entered Medline: 19980908
AB . . . superfamily ligands. We demonstrate by both a mammalian two-hybrid and a biochemical approach that human Smad2 and Smad4, two essential **Smad** proteins involved in mediating TGF-beta transcriptional responses in endothelial and other cell types, can functionally interact with the transcriptional **coactivator** CREB binding protein (**CBP**). This interaction is specific in that it requires ligand (TGF-beta) activation and is mediated by the transcriptional activation domains of. . .

L14 ANSWER 17 OF 19 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC.DUPLICATE 14
ACCESSION NUMBER: 1998:362124 BIOSIS
DOCUMENT NUMBER: PREV199800362124
TITLE: The tumor suppressor Smad4/DPC4 and transcriptional adaptor CBP/p300 are coactivators for Smad3 in TGF-beta-induced transcriptional activation.
AUTHOR(S): Feng, Xin-Hua; Zhang, Ying; Wu, Rui-Yun; Derynck, Rik (1)
CORPORATE SOURCE: (1) Dep. Growth and Development, Programs Cell Biol. and Developmental Biol., Univ. California, San Francisco, CA 94143-0640 USA
SOURCE: Genes & Development, (July 15, 1998) Vol. 12, No. 14, pp. 2153-2163.
ISSN: 0890-9369.
DOCUMENT TYPE: Article
LANGUAGE: English
AB **Smads** regulate transcription of defined genes in response to TGF-beta receptor activation, although the mechanisms of **Smad** -mediated transcription are not well understood. We demonstrate that the TGF-beta-inducible Smad3 uses the tumor suppressor Smad4/DPC4 and **CBP**/p300 as transcriptional **coactivators**, which associate with Smad3 in response to TGF-beta. The association of **CBP** with Smad3 was localized to the carboxyl terminus of Smad3, which is required for transcriptional activation, and a defined segment in **CBP**. Furthermore, **CBP**/p300 stimulated both TGF-beta- and **Smad**-induced transcription in a Smad4/DPC4-dependent fashion. Smad3 transactivation and TGF-beta-induced transcription were inhibited by

expressing EIA, which interferes with **CBP** functions. The **coactivator** functions and physical interactions of Smad4 and **CBP**/p300 with Smad3 allow a model for the induction of gene expression in response to TGF-beta.

L14 ANSWER 18 OF 19 MEDLINE DUPLICATE 15
ACCESSION NUMBER: 1998344004 MEDLINE
DOCUMENT NUMBER: 98344004 PubMed ID: 9679056
TITLE: TGF-beta-stimulated cooperation of **smad** proteins with the **coactivators CBP**/p300.
AUTHOR: Janknecht R; Wells N J; Hunter T
CORPORATE SOURCE: Molecular Biology and Virology Laboratory, The Salk Institute, La Jolla, California 92037 USA.. rjanknecht@aim.salk.edu
CONTRACT NUMBER: CA14195 (NCI)
CA39780 (NCI)
SOURCE: GENES AND DEVELOPMENT, (1998 Jul 15) 12 (14) 2114-9. Journal code: 8711660. ISSN: 0890-9369.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 199808
ENTRY DATE: Entered STN: 19980903
Last Updated on STN: 19980903
Entered Medline: 19980821
TI TGF-beta-stimulated cooperation of **smad** proteins with the **coactivators CBP**/p300.
AB . . . stimulate gene transcription is poorly understood. We report that TGF-beta receptor phosphorylation of Smad3 promotes its interaction with the paralogous **coactivators CBP** and p300, whereas **CBP**/p300 binding to nonphosphorylated Smad3 or its oligomerization partner Smad4 is negatively regulated by **Smad**-intramolecular interactions. Furthermore, p300 and TGF-beta receptor-phosphorylated Smad3 synergistically augment transcriptional activation. Thus, CBP/p300 are important components of activin/TGF-beta signaling and. . .

L14 ANSWER 19 OF 19 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC.DUPLICATE 16
ACCESSION NUMBER: 1999:71820 BIOSIS
DOCUMENT NUMBER: PREV199900071820
TITLE: Role of p300, a transcriptional coactivator, in signalling of TGF-beta.
AUTHOR(S): Nishihara, Ayako; Hanai, Jun-Ichi; Okamoto, Nobuaki; Yanagisawa, Jun; Kato, Shigeaki; Miyazono, Kohei; Kawabata, Masahiro (1)
CORPORATE SOURCE: (1) Dep. Biochem., Cancer Inst., Japanese Found. Cancer Res., 1-37-1 Kami-Ikebukuro, Toshima-ku, Tokyo 170-8455 Japan
SOURCE: Genes to Cells, (Sept., 1998) Vol. 3, No. 9, pp. 613-623. ISSN: 1356-9597.
DOCUMENT TYPE: Article
LANGUAGE: English
AB Background: **Smad** proteins are novel transcriptional regulators mediating the signalling of the transforming growth factor-beta (TGF-beta) superfamily. **Coactivators** such as p300/**CBP** promote transactivation by various transcription factors through a direct interaction with them. Adenoviral oncoprotein E1A, which binds p300, was shown. . . the possibility that p300 may be involved in TGF-beta signalling. Results: We investigated whether p300 is involved in transactivation by **Smads**. p300 enhanced the **Smad** -induced transactivation of p3TP-Lux, a TGF-beta responsive reporter. E1A inhibited this enhancement, and the inhibition required its ability to bind p300/**CBP**. p300 and Smad3, as well as Smad2, interacted in

vivo in a ligand-dependent manner. The binding region in Smad3 was. . . in a dominant-negative fashion. Conclusion: p300 interacted with Smad2 and Smad3 in a ligand-dependent manner, and enhanced the transactivation by **Smads**. Our results present the molecular basis of the transactivation by **Smad** proteins.

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=> d his

     (FILE 'HOME' ENTERED AT 14:50:48 ON 27 MAY 2003)

     FILE 'MEDLINE, BIOSIS, EMBASE, CAPLUS' ENTERED AT 14:51:06 ON 27 MAY 2003
L1           482 S KATO SHIGEAKI /AU
L2            16 S YANAGISAWA JUN /AU
L3            11 S L1 AND L2
L4             8 DUP REM L3 (3 DUPLICATES REMOVED)
L5          2545 S SMAD (P) TRANSCRIPTIO? (P) FACTOR
L6          2124 S SMAD (S) TRANSCRIPTIO? (S) FACTOR
L7           145 S SMAD (S) COACTIVAT?
L8            74 S SMAD (S) COACTIVAT? (S) P300
L9            29 DUP REM L8 (45 DUPLICATES REMOVED)
L10            0 S (SMAD (S) COACTIVAT?) (P) SCREEN?
L11           11 S (SMAD (S) COACTIVAT?) (P) ASSAY?
L12            4 DUP REM L11 (7 DUPLICATES REMOVED)
L13           52 S SMAD (S) COACTIVAT? (S) CBP
L14           19 DUP REM L13 (33 DUPLICATES REMOVED)

=> s smad (s) yeast (s) two
L15           46 SMAD (S) YEAST (S) TWO

=> dup rem l15
PROCESSING COMPLETED FOR L15
L16           21 DUP REM L15 (25 DUPLICATES REMOVED)

=> d l16 total ibib kwic

L16  ANSWER 1 OF 21     MEDLINE                          DUPLICATE 1
ACCESSION NUMBER:    2003136911     MEDLINE
DOCUMENT NUMBER:     22538225   PubMed ID: 12650946
TITLE:               Identification of three novel Smad binding proteins
                     involved in cell polarity.
AUTHOR:              Warner Dennis R; Pisano M Michele; Roberts Emily A; Greene
                     Robert M
CORPORATE SOURCE:    University of Louisville Birth Defects Center, Department
                     of Molecular, Cellular, and Craniofacial Biology,
                     University of Louisville School of Dentistry, 501 South
                     Preston Street, Suite 301, Louisville, KY 40292, USA..
                     drwarn01@gwise.louisville.edu
CONTRACT NUMBER:     DE 05550 (NIDCR)
     DE 12363 (NIDCR)
     DE 12858 (NIDCR)
SOURCE:              FEBS LETTERS, (2003 Mar 27) 539 (1-3) 167-73.
                     Journal code: 0155157. ISSN: 0014-5793.
PUB. COUNTRY:        Netherlands
DOCUMENT TYPE:       Journal; Article; (JOURNAL ARTICLE)
LANGUAGE:            English
FILE SEGMENT:        Priority Journals
ENTRY MONTH:         200304
ENTRY DATE:          Entered STN: 20030325
                     Last Updated on STN: 20030425
                     Entered Medline: 20030424
AB   A yeast two-hybrid screen was utilized to identify
     novel Smad 3 binding proteins expressed in developing mouse
     orofacial tissue.  Three proteins (Erbin, Par-3, and Dishevelled) were
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identified that share several. . .

L16 ANSWER 2 OF 21 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC.DUPLICATE 2
ACCESSION NUMBER: 2002:565000 BIOSIS
DOCUMENT NUMBER: PREV200200565000
TITLE: Identification of mZnf8, a mouse Kruppel-like transcriptional repressor, as a novel nuclear interaction partner of Smad1.
AUTHOR(S): Jiao, Kai; Zhou, Yingna; Hogan, Brigid L. M. (1)
CORPORATE SOURCE: (1) Vanderbilt University School of Medicine, C-2310 Medical Center North, Nashville, TN, 37232: Brigid.Hogan@mcmail.vanderbilt.edu USA
SOURCE: Molecular and Cellular Biology, (November, 2002) Vol. 22, No. 21, pp. 7633-7644. http://mcb.asm.org/. print. ISSN: 0270-7306.
DOCUMENT TYPE: Article
LANGUAGE: English
AB To identify novel genes that play critical roles in mediating bone morphogenetic protein (BMP) signal pathways, we performed a **yeast two**-hybrid screen using Smad1 as bait. A novel mouse Kruppel-type zinc finger protein, mZnf8, was isolated. Interactions between mZnf8 and **Smad** proteins were further analyzed with various in vitro and in vivo approaches, including mammalian **two**-hybrid, in vitro glutathione S-transferase pulldown, and copurification assays. Results from functional analysis indicate that mZnf8 is a nuclear transcriptional repressor.. . .

L16 ANSWER 3 OF 21 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC.DUPLICATE 3
ACCESSION NUMBER: 2002:441258 BIOSIS
DOCUMENT NUMBER: PREV200200441258
TITLE: Yes-Associated Protein (YAP65) interacts with Smad7 and potentiates its inhibitory activity against TGF-beta/Smad signaling.
AUTHOR(S): Ferrigno, Olivier; Lallemand, Francois; Verrecchia, Franck; L'hoste, Sebastien; Camonis, Jacques; Atfi, Azeddine; Mauviel, Alain (1)
CORPORATE SOURCE: (1) INSERM U532, Institut de Recherche sur la Peau, Hopital Saint-Louis, 1, Avenue Claude Vellefaux, Pavillon Bazin, 75475, Paris Cedex 10: mauviel@chu-stlouis.fr France
SOURCE: Oncogene, (25 July, 2002) Vol. 21, No. 32, pp. 4879-4884. http://www.nature.com/onc. print. ISSN: 0950-9232.
DOCUMENT TYPE: Article
LANGUAGE: English
AB. . . the cell surface through serine/threonine kinase receptors. Intracellular propagation of the signal occurs by phosphorylation of intracellular proteins of the **Smad** family. Smad7 belongs to the subclass of inhibitory **Smads** that function as antagonists of TGF-beta signaling. A **yeast two**-hybrid screen of a human placental cDNA expression library using full-length mouse Smad7 as bait identified Yes-Associated Protein (YAP65) as a. . .

L16 ANSWER 4 OF 21 MEDLINE DUPLICATE 4
ACCESSION NUMBER: 2002287191 MEDLINE
DOCUMENT NUMBER: 22020602 PubMed ID: 12023901
TITLE: Repression of Smad2 and Smad3 transactivating activity by association with a novel splice variant of CCAAT-binding factor C subunit.
AUTHOR: Chen Feifei; Ogawa Kenji; Liu Xubao; Stringfield Teresa M; Chen Yan
CORPORATE SOURCE: Department of Medical and Molecular Genetics and the Walther Oncology Center, Indiana University School of

Medicine, and the Walther Cancer Institute, Indianapolis, IN 46202, USA.
CONTRACT NUMBER: R01 DK55991 (NIDDK)
SOURCE: BIOCHEMICAL JOURNAL, (2002 Jun 1) 364 (Pt 2) 571-7. Journal code: 2984726R. ISSN: 0264-6021.
PUB. COUNTRY: England: United Kingdom
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 200207
ENTRY DATE: Entered STN: 20020528
Last Updated on STN: 20020716
Entered Medline: 20020715

AB . . . 2) and Smad3, which function as transcription factors to regulate gene expression. Using the MH2 domain (Mad homologue domain of **Smad** proteins 2) of Smad3 in a **yeast two** -hybrid screening, we isolated a novel splice variant of CAATT-binding factor subunit C (CBF-C), designated CBF-Cb, that associated with Smad3. CBF-C. . .

L16 ANSWER 5 OF 21 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC.
ACCESSION NUMBER: 2002:482154 BIOSIS
DOCUMENT NUMBER: PREV200200482154
TITLE: Search for interacting proteins of esophageal cancer related gene-1 encoded protein through the yeast two-hybrid system.
AUTHOR(S): Wang Jianbo (1); Fan Yu (1); Guo Liping (1); Lu Shixin (1)
CORPORATE SOURCE: (1) Department of Chemical Etiology and Carcinogenesis, Cancer Institute (Hospital), Chinese Academy of Medical Sciences, Peking Union Medical College, Beijing, 100021 China
SOURCE: Zhonghua Zhongliu Zazhi, (May, 2002) Vol. 24, No. 3, pp. 219-221. print.
ISSN: 0253-3766.
DOCUMENT TYPE: Article
LANGUAGE: Chinese

AB. . . DNA-binding domain of GAL4. Then, it was used as a bait to screen the human fetal liver cDNA library by **yeast two** -hybrid, with the cDNA fragment inserted into pACT2 vector and fused in-frame to the Gal4 activation domain. If ECRG-1 interacted with a protein encoded by a cDNA fragmant in the **yeast**, the transcription of reporter Gene could be activated. With the false positive clonies eliminated, the inserts in the positive plasmids. . . In approximately 3X106 independent tansformants screened, 23 clonies exhibited the expression of reporter gene. After eliminating the false positive clonies, **two** cDNA fragments were obtained. DNA sequencing revealed that one encoded Miz-1 (Myc-interacting Zn finger protein-1), and another encoded FLNA(actin-binding protein-280),. . . p15 promotor and activated the transcription. FLNA, being an actin-binding protein took part in the TGF-beta pathway via interaction with **Smad**. Conclusion: ECRG-1 is able to be specifically bound to Miz-1 and FLNA in the **yeast**. It may play a role in the regulation of cell cycle via interaction with Miz-1 and FLNA.

L16 ANSWER 6 OF 21 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC.
ACCESSION NUMBER: 2002:323264 BIOSIS
DOCUMENT NUMBER: PREV200200323264
TITLE: Modulation of TGFbeta/Smad transcriptional responses through targeted degradation of the TGFbeta inducible early gene by the human seven in absentia homologue.
AUTHOR(S): Johnsen, Steven A. (1); Subramaniam, Malayannan (1); Janknecht, Ralf (1); Spelsberg, Thomas C. (1)
CORPORATE SOURCE: (1) Department of Biochemistry and Molecular Biology, Mayo Clinic and Foundation, 200 First St SW, Rochester, MN,

55905 USA
SOURCE: FASEB Journal, (March 20, 2002) Vol. 16, No. 4, pp. A169. http://www.fasebj.org/. print.
Meeting Info.: Annual Meeting of the Professional Research Scientists on Experimental Biology New Orleans, Louisiana, USA April 20-24, 2002
ISSN: 0892-6638.
DOCUMENT TYPE: Conference
LANGUAGE: English
AB. . . TGFbeta inducible early gene (TIEG) is a novel Kruppel-like transcription factor that is rapidly induced upon TGFbeta treatment. TIEG influences TGFbeta/**Smad** signaling by down-regulating negative feedback through the inhibitory Smad7. In order to understand the regulation of TIEG protein we utilized the **yeast two** -hybrid system and identified an E3 ubiquitin ligase, seven in absentia homolog-1 (SIAH1), as a TIEG interacting protein. We show that. . . 7 promoter activities by TIEG overexpression in transient transfection assays. Furthermore, overexpression of SIAH1 (or a dominant negative SIAH1) affects TGFbeta/**Smad** dependent transcriptional activation. These findings suggest a novel mechanism whereby the ability of TGFbeta to modulate gene transcription may be. . .

L16 ANSWER 7 OF 21 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC.DUPLICATE 5
ACCESSION NUMBER: 2002:459024 BIOSIS
DOCUMENT NUMBER: PREV200200459024
TITLE: Structure, upstream promoter region, and functional domains of a mouse and human Mix paired-like homeobox gene.
AUTHOR(S): Sahr, Kenneth; Dias, Dora Campos; Sanchez, Roberto; Chen, Dongli; Chen, Siming W.; Gudas, Lorraine J.; Baron, Margaret H. (1)
CORPORATE SOURCE: (1) Department of Medicine, Mount Sinai School of Medicine, 1425 Madison Avenue, New York, NY, 10029: margaret.baron@mssm.edu USA
SOURCE: Gene (Amsterdam), (29 May, 2002) Vol. 291, No. 1-2, pp. 135-147. http://www.elsevier.com/locate/gene. print.
ISSN: 0378-1119.
DOCUMENT TYPE: Article
LANGUAGE: English
AB. . . promoter regions of a mouse and human Mix-like gene. Both genes map to syntenic regions of chromosome 1 and contain **two** coding exons, with the paired-type homeodomain split between the exons within helix 3. Differentiating mouse embryonic stem cells transcribe a. . . of the mouse Mix gene revealed the presence of a putative initiator region and TATA box as well as potential **Smad**, FoxH1/FAST, T-box, COUP-TF, C/EBP, GATA, HNF3 binding sites and retinoic acid response elements. A number of these sites are conserved. . . highly conserved carboxy-terminal polar/acidic regions with the potential to form an amphipathic helix and the ability to activate transcription in **yeast**. Mouse Mix expressed in COS cells or in vitro binds a DNA consensus sequence identified previously for paired class homeodomain. .

L16 ANSWER 8 OF 21 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC.
ACCESSION NUMBER: 2001:354340 BIOSIS
DOCUMENT NUMBER: PREV200100354340
TITLE: Filamin associates with Smads and regulates transforming growth factor-beta signaling.
AUTHOR(S): Sasaki, Aya; Masuda, Yoshiko; Ohta, Yasutaka; Ikeda, Kyoji; Watanabe, Ken (1)
CORPORATE SOURCE: (1) Dept. of Geriatric Research, National Inst. for Longevity Sciences, 36-3 Gengo, Moriokacho, Obu, Aichi, 474-8522: kwatanab@nils.go.jp Japan
SOURCE: Journal of Biological Chemistry, (May 25, 2001) Vol. 276,

No. 21, pp. 17871-17877. print.
ISSN: 0021-9258.
DOCUMENT TYPE: Article
LANGUAGE: English
SUMMARY LANGUAGE: English
AB Members of the **Smad** proteins transmit signals triggered by the ligands of transforming growth factor (TGF)-beta superfamily. Ligand-activated receptors induce phosphorylation of so-called receptor-regulated **Smads**, which then accumulate in the nucleus to participate in target gene transcription, in collaboration with **Smad**-interacting proteins. We performed **yeast two**-hybrid screening and identified filamin, a cytoskeletal actin-binding protein 280, as a Smad5-interacting protein. Filamin was found to be associated not only with Smad5 but also with other **Smad** proteins, including TGF-beta/activin receptor-regulated Smad2. TGF-beta signaling was defective in filamin-deficient human melanoma cells M2 compared with a filamin-transfected subline. . . . to be due to impaired receptor-induced serine phosphorylation of Smad2. These results suggest that filamin plays an important role in **Smad** -mediated signaling.

L16 ANSWER 9 OF 21 CAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 2001:476071 CAPLUS
DOCUMENT NUMBER: 135:190556
TITLE: Smad interactors in bone morphogenetic protein signaling
AUTHOR(S): Yang, Xiangli; Cao, Xu
CORPORATE SOURCE: Department of Pathology, University of Alabama, Birmingham, AL, USA
SOURCE: Methods in Molecular Biology (Totowa, NJ, United States) (2001), 177(Two-Hybrid Systems), 163-178
CODEN: MMBIED; ISSN: 1064-3745
PUBLISHER: Humana Press Inc.
DOCUMENT TYPE: Journal
LANGUAGE: English
REFERENCE COUNT: 24 THERE ARE 24 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT
IT Analysis
(**yeast two**-hybrid; **Smad** interactors in bone morphogenetic protein signaling)

L16 ANSWER 10 OF 21 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC.DUPLICATE 6
ACCESSION NUMBER: 2001:126700 BIOSIS
DOCUMENT NUMBER: PREV200100126700
TITLE: Conserved role for 14-3-3epsilon downstream of type I TGFbeta receptors.
AUTHOR(S): McGonigle, Sharon; Beall, Melissa J.; Feeney, Erika L.; Pearce, Edward J. (1)
CORPORATE SOURCE: (1) Department of Microbiology and Immunology, College of Veterinary Medicine, Cornell University, Ithaca, NY, 14853-6401: ejp2@cornell.edu USA
SOURCE: FEBS Letters, (9 February, 2001) Vol. 490, No. 1-2, pp. 65-69. print.
ISSN: 0014-5793.
DOCUMENT TYPE: Article
LANGUAGE: English
SUMMARY LANGUAGE: English
AB. . . factor beta (TGFbeta) receptor on the surface of adult parasites. Using the intracellular domain of SmRK1 as bait in a **yeast two**-hybrid screen we identified an interaction with S. mansoni 14-3-3epsilon. The interaction which is phosphorylation-dependent is not specific to schistosomes since. . . binds to TbetaRI, the human type I TGFbeta receptor. 14-3-3epsilon enhances TGFbeta-mediated signaling by

TbetaRI and is the first TbetaRI-interacting non-**Smad** protein identified that positively regulates this receptor. The interaction of 14-3-3epsilon with schistosome and human TbetaRI suggests a conserved, but. . .

L16 ANSWER 11 OF 21 MEDLINE DUPLICATE 7
ACCESSION NUMBER: 2001082699 MEDLINE
DOCUMENT NUMBER: 20538422 PubMed ID: 11016919
TITLE: Smurf2 is a ubiquitin E3 ligase mediating proteasome-dependent degradation of Smad2 in transforming growth factor-beta signaling.
AUTHOR: Lin X; Liang M; Feng X H
CORPORATE SOURCE: Departments of Surgery and Molecular and Cellular Biology, Baylor College of Medicine, Houston, Texas 77030, USA.. xialin@bcm.tmc.edu
SOURCE: JOURNAL OF BIOLOGICAL CHEMISTRY, (2000 Nov 24) 275 (47) 36818-22.
Journal code: 2985121R. ISSN: 0021-9258.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
OTHER SOURCE: GENBANK-AF301463
ENTRY MONTH: 200101
ENTRY DATE: Entered STN: 20010322
Last Updated on STN: 20030304
Entered Medline: 20010108
AB . . . study, we have identified a novel HECT class ubiquitin E3 ligase, designated Smurf2, that negatively regulates Smad2 signaling. In both **yeast two**-hybrid and in vitro binding assays, we found that Smurf2 could interact with receptor-activated **Smads** (R-**Smads**), including Smad1, Smad2, and Smad3 but not Smad4. Ectopic expression of Smurf2 was sufficient to reduce the steady-state levels of. . .

L16 ANSWER 12 OF 21 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC.DUPLICATE 8
ACCESSION NUMBER: 2000:346677 BIOSIS
DOCUMENT NUMBER: PREV200000346677
TITLE: Smad6 as a transcriptional corepressor.
AUTHOR(S): Bai, Shuting; Shi, Xingming; Yang, Xiangli; Cao, Xu (1)
CORPORATE SOURCE: (1) 1670 University Blvd., VH G002, Birmingham, AL, 35294-0019 USA
SOURCE: Journal of Biological Chemistry, (March 24, 2000) Vol. 275, No. 12, pp. 8267-8270. print.
ISSN: 0021-9258.
DOCUMENT TYPE: Article
LANGUAGE: English
SUMMARY LANGUAGE: English
AB Smad6 and Smad7, a subgroup of **Smad** proteins, antagonize the signals elicited by transforming growth factor-beta. These **two Smads**, induced by transforming growth factor-beta or bone morphogenetic protein (BMP) stimulation, form stable associations with their activated type I receptors, blocking phosphorylation of receptor-regulated **Smads** in the cytoplasm. Here we show that Smad6 interacts with homeobox (Hox) c-8 as a transcriptional corepressor, inhibiting BMP signaling in the nucleus. The interaction between Smad6 and Hoxc-8 was identified by a **yeast two**-hybrid approach and further demonstrated by co-immunoprecipitation assays in cells. Gel shift assays show that Smad6, but not Smad7, interacts with. . .

L16 ANSWER 13 OF 21 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC.DUPLICATE 9
ACCESSION NUMBER: 2000:305503 BIOSIS

DOCUMENT NUMBER: PREV200000305503
TITLE: Ski acts as a co-repressor with Smad2 and Smad3 to regulate the response to type beta transforming growth factor.
AUTHOR(S): Xu, Weidong; Angelis, Konstantina; Danielpour, David; Haddad, Maher M.; Bischof, Oliver; Campisi, Judith; Stavnezer, Ed (1); Medrano, Estela E.
CORPORATE SOURCE: (1) Department of Biochemistry, Case Western Reserve University, 2109 Adelbert Road, Cleveland, OH, 44106 USA
SOURCE: Proceedings of the National Academy of Sciences of the United States of America, (May 23, 2000) Vol. 97, No. 11, pp. 5924-5929. print.
ISSN: 0027-8424.
DOCUMENT TYPE: Article
LANGUAGE: English
SUMMARY LANGUAGE: English
AB. . . encodes a transcription factor that binds DNA only in association with other proteins. To identify co-binding proteins, we performed a **yeast two**-hybrid screen. The results of the screen and subsequent co-immunoprecipitation studies identified Smad2 and Smad3, **two** transcriptional activators that mediate the type beta transforming growth factor (TGF-beta) response, as Ski-interacting proteins. In Ski-transformed cells, all of. . . the absence of added TGF-beta. DNA binding assays showed that Ski, Smad2, Smad3, and Smad4 form a complex with the **Smad**/Ski binding element GTCTAGAC (SBE). Ski repressed TGF-beta-induced expression of 3TP-Lux, the natural plasminogen activator inhibitor 1 promoter and of reporter. . . the related CAGA element. In addition, Ski repressed a TGF-beta-inducible promoter containing AP-1 (TRE) elements activated by a combination of **Smads** , Fos, and/or Jun proteins. Ski also repressed synergistic activation of promoters by combinations of **Smad** proteins but failed to repress in the absence of Smad4. Thus, Ski acts in opposition to TGF-beta-induced transcriptional activation by functioning as a **Smad**-dependent co-repressor. The biological relevance of this transcriptional repression was established by showing that overexpression of Ski abolished TGF-beta-mediated growth inhibition. . .

L16 ANSWER 14 OF 21 MEDLINE DUPLICATE 10
ACCESSION NUMBER: 2000386789 MEDLINE
DOCUMENT NUMBER: 20347038 PubMed ID: 10887155
TITLE: A novel smad nuclear interacting protein, SNIP1, suppresses p300-dependent TGF-beta signal transduction.
AUTHOR: Kim R H; Wang D; Tsang M; Martin J; Huff C; de Caestecker M P; Parks W T; Meng X; Lechleider R J; Wang T; Roberts A B
CORPORATE SOURCE: Laboratory of Cell Regulation and Carcinogenesis, National Cancer Institute, Bethesda, MD 20892, USA.
SOURCE: GENES AND DEVELOPMENT, (2000 Jul 1) 14 (13) 1605-16.
Journal code: 8711660. ISSN: 0890-9369.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
ENTRY MONTH: 200008
ENTRY DATE: Entered STN: 20000818
Last Updated on STN: 20000818
Entered Medline: 20000804
AB . . . controlling cell growth and differentiation. Effects of TGF-beta family ligands are mediated by Smad proteins. To understand the mechanism of **Smad** function, we sought to identify novel interactors of **Smads** by use of a **yeast two**-hybrid system. A 396-amino acid nuclear protein termed SNIP1 was cloned and shown to harbor a nuclear localization signal (NLS) and. . .

L16 ANSWER 15 OF 21 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC.DUPLICATE 11

ACCESSION NUMBER: 2000:403715 BIOSIS
DOCUMENT NUMBER: PREV200000403715
TITLE: Smad1 domains interacting with Hoxc-8 induce osteoblast differentiation.
AUTHOR(S): Yang, Xiangli; Ji, Xiaohui; Shi, Xingming; Cao, Xu (1)
CORPORATE SOURCE: (1) 1670 University Blvd., VH G002, Birmingham, AL, 35294 USA
SOURCE: Journal of Biological Chemistry, (January 14, 2000) Vol. 275, No. 2, pp. 1065-1072. print.
ISSN: 0021-9258.
DOCUMENT TYPE: Article
LANGUAGE: English
SUMMARY LANGUAGE: English
AB. . . that induce osteoblast differentiation and bone formation. The signal transduction of bone morphogenetic proteins has recently been discovered to involve **Smad** proteins. Smad1 is an essential intracellular component that is specifically phosphorylated by bone morphogenetic protein receptors and translocated into the. . . protein simulation through an interaction with a homeodomain transcription factor, Hoxc-8. In the present study, the interaction domains between the **two** proteins were characterized by deletional analysis in both **yeast two**-hybrid and gel shift assays. **Two** regions within the amino-terminal 87 amino acid residues of Smad1 were mapped to interact with Hoxc-8, one of which binds. . .

L16 ANSWER 16 OF 21 MEDLINE DUPLICATE 12
ACCESSION NUMBER: 1999329065 MEDLINE
DOCUMENT NUMBER: 99329065 PubMed ID: 10400677
TITLE: SIP1, a novel zinc finger/homeodomain repressor, interacts with Smad proteins and binds to 5'-CACCT sequences in candidate target genes.
AUTHOR: Verschueren K; Remacle J E; Collart C; Kraft H; Baker B S; Tylzanowski P; Nelles L; Wuytens G; Su M T; Bodmer R; Smith J C; Huylebroeck D
CORPORATE SOURCE: Department of Cell Growth, Differentiation and Development (VIB-07), Flanders Interuniversity Institute for Biotechnology (VIB), Herestraat49, B-3000 Leuven, Belgium.
SOURCE: JOURNAL OF BIOLOGICAL CHEMISTRY, (1999 Jul 16) 274 (29) 20489-98.
Journal code: 2985121R. ISSN: 0021-9258.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Priority Journals
OTHER SOURCE: GENBANK-AF033116
ENTRY MONTH: 199908
ENTRY DATE: Entered STN: 19990827
Last Updated on STN: 19990827
Entered Medline: 19990819
AB . . . nuclear translocation of Smad proteins, which then participate in the regulation of expression of target genes. We describe a novel **Smad**-interacting protein, SIP1, which was identified using the **yeast two**-hybrid system. Although SIP1 interacts with the MH2 domain of receptor-regulated Smads in yeast and in vitro, its interaction with full-length. . .

L16 ANSWER 17 OF 21 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC.DUPLICATE 13
ACCESSION NUMBER: 1999:262978 BIOSIS
DOCUMENT NUMBER: PREV199900262978
TITLE: Smad1 interacts with homeobox DNA-binding proteins in bone morphogenetic protein signaling.
AUTHOR(S): Shi, Xingming; Yang, Xiangli; Chen, Di; Chang, Zhijie; Cao, Xu (1)

CORPORATE SOURCE: (1) 1670 University Blvd., VH G002, Birmingham, AL, 35294-0019 USA
SOURCE: Journal of Biological Chemistry, (May 7, 1999) Vol. 274, No. 19, pp. 13711-13717.
ISSN: 0021-9258.
DOCUMENT TYPE: Article
LANGUAGE: English
SUMMARY LANGUAGE: English
AB Bone morphogenetic proteins (BMP) transduce their signals into the cell through a family of mediator proteins known as **Smads**. Upon phosphorylation by the BMP receptors, Smad1 interacts with Smad4 and translocates into the nucleus where the complex recruits DNA-binding. . . protein(s) to activate specific gene transcription. However, the DNA-binding protein(s) involved in BMP signaling has not been identified. Using a **yeast two**-hybrid approach, we found that Smad1 interacts with Hoxc-8, a homeodomain transcription factor. The interaction between Smad1 and Hoxc-8 was confirmed. . .

L16 ANSWER 18 OF 21 CAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 1999:575400 CAPLUS
DOCUMENT NUMBER: 131:296761
TITLE: Homomeric and heteromeric interactions of Smad3 and Smad4 identified with yeast two-hybrid system
AUTHOR(S): Liu, Yiping; Yang, Xiao; Deng, Chuxia; Deng, Jixian; Jiang, Zhongjun; Lu, Yaxin; Cheng, Xuan; Huang, Cuifen
CORPORATE SOURCE: Institute of Biotechnology, Academy of Military Medical Sciences, Beijing, 100071, Peop. Rep. China
SOURCE: Zhongguo Shengwu Huaxue Yu Fenzi Shengwu Xuebao (1999), 15(4), 538-542
CODEN: ZSHXF2; ISSN: 1007-7626
PUBLISHER: Zhongguo Shengwu Huaxue Yu Fenzi Shengwu Xuebao Bianweihui
DOCUMENT TYPE: Journal
LANGUAGE: Chinese
IT Transcription factors
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
(**Smad**-3; homomeric and heteromeric interactions of transforming growth factor beta subunits Smad3 and Smad4 identified with **yeast two**-hybrid system)
IT Transcription factors
RL: BPR (Biological process); BSU (Biological study, unclassified); BIOL (Biological study); PROC (Process)
(**Smad**-4; homomeric and heteromeric interactions of transforming growth factor beta subunits Smad3 and Smad4 identified with **yeast two**-hybrid system)

L16 ANSWER 19 OF 21 CAPLUS COPYRIGHT 2003 ACS
ACCESSION NUMBER: 1998:800006 CAPLUS
DOCUMENT NUMBER: 130:48279
TITLE: Two-hybrid system employing FAST-1 and Smad domains for detection of modulators of signaling by transforming growth factor beta superfamily
INVENTOR(S): Whitman, Malcolm; Chen, Xin
PATENT ASSIGNEE(S): President and Fellows of Harvard College, USA
SOURCE: PCT Int. Appl., 107 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE

WO 9853830 A1 19981203 WO 1998-US10983 19980528
W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, GH, GM, GW, HU, ID, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, UZ, VN, YU, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM
RW: GH, GM, KE, LS, MW, SD, SZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG
AU 9877053 A1 19981230 AU 1998-77053 19980528
US 6365711 B1 20020402 US 1998-87134 19980528
US 2002160355 A1 20021031 US 2002-44442 20020111
PRIORITY APPLN. INFO.: US 1997-47991P P 19970528
US 1998-87134 A3 19980528
WO 1998-US10983 W 19980528
REFERENCE COUNT: 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT
ST **yeast two** hybrid assay FAST1 **Smad**; transforming growth factor beta signaling modulator
IT Cell
Yeast
(**two** hybrid system in; **two**-hybrid system employing FAST-1 and **Smad** domains for detection of modulators of signaling by transforming growth factor beta superfamily)
IT Genetic methods
(**yeast two** hybrid assay; **two**-hybrid system employing FAST-1 and **Smad** domains for detection of modulators of signaling by transforming growth factor beta superfamily)

L16 ANSWER 20 OF 21 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC.DUPLICATE 14
ACCESSION NUMBER: 1997:244000 BIOSIS
DOCUMENT NUMBER: PREV199799543203
TITLE: Heteromeric and homomeric interactions correlate with signaling activity and functional cooperativity of Smad3 and Smad4/DPC4.
AUTHOR(S): Wu, Rui-Yun; Zhang, Ying; Feng, Xin-Hua; Derynck, Rik (1)
CORPORATE SOURCE: (1) Dep. Growth Development, Univ. California at San Francisco, San Francisco, CA 94143-0640 USA
SOURCE: Molecular and Cellular Biology, (1997) Vol. 17, No. 5, pp. 2521-2528.
ISSN: 0270-7306.
DOCUMENT TYPE: Article
LANGUAGE: English
AB Homologs of Drosophila Mad function as downstream mediators of the receptors for transforming growth factor beta (TGF-beta)-related factors. **Two** homologs, the receptor-associated Smad3 and the tumor suppressor Smad4/DPC4, synergize to induce ligand-independent TGF-beta activities and are essential mediators of. . . the natural TGF-beta response. We now show that Smad3 and Smad4 associate in homomeric and heteromeric interactions, as assessed by **yeast two** -hybrid and coimmunoprecipitation analyses. Heteromeric interactions are mediated through the conserved C-terminal domains of Smad3 and Smad4. In Smad3, the homomeric. . . Mad activity in Drosophila or decreased tumor suppressor activity of Smad4/DPC4 in pancreas cancer, including a short C-terminal truncation and **two** point mutations in the conserved C-terminal domains, impair the ability of Smad3 and Smad4 to undergo homo- and heteromeric associations.. . . interactions result in decreased signaling activity. Finally, we evaluated the ability of Smad3 or Smad4 to induce transcriptional activation in **yeast**. These results correlate the ability of individual **Smads** to homomerize with transcriptional activation and additionally with their biological activity in mammalian cells.

L16 ANSWER 21 OF 21 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC.DUPLICATE 15

ACCESSION NUMBER: 1997:496480 BIOSIS
DOCUMENT NUMBER: PREV199799795683
TITLE: Smad4 and FAST-1 in the assembly of activin-responsive factor.
AUTHOR(S): Chen, Xin; Weisberg, Ellen; Fridmacher, Valerie; Watanabe, Minoru; Naco, Grace; Whitman, Malcolm (1)
CORPORATE SOURCE: (1) Dep. Cell Biol., Harvard Med. Sch., 240 Longwood Ave., Boston, MA 02115-5730 USA
SOURCE: Nature (London), (1997) Vol. 389, No. 6646, pp. 85-87. ISSN: 0028-0836.
DOCUMENT TYPE: Article
LANGUAGE: English

AB. . . . of signalling molecules work by activating transmembrane receptors with phosphorylating activity (serine-threonine kinase receptors); these in turn phosphorylate and activate **SMADs**, a class of signal transducers. Activins are growth factors that act primarily through Smad2, possibly in partnership with Smad4, which forms heteromeric complexes with different ligand-specific **SMADs** after activation. In frog embryos, Smad2 participates in an activin-responsive factor (ARF), which then binds to a promoter element of. . . to a novel carboxyterminal domain of FAST-1, and find that overexpression of this domain specifically inhibits activin signalling. In a **yeast two**-hybrid assay, the FAST-1 carboxy terminus interacts with Smad2 but not Smad4. Deletion mutants of the FAST-1 carboxy terminus that still. . .

=> d his

(FILE 'HOME' ENTERED AT 14:50:48 ON 27 MAY 2003)

FILE 'MEDLINE, BIOSIS, EMBASE, CAPLUS' ENTERED AT 14:51:06 ON 27 MAY 2003

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L1          482 S KATO SHIGEAKI /AU
L2           16 S YANAGISAWA JUN /AU
L3           11 S L1 AND L2
L4            8 DUP REM L3 (3 DUPLICATES REMOVED)
L5         2545 S SMAD (P) TRANSCRIPTIO? (P) FACTOR
L6         2124 S SMAD (S) TRANSCRIPTIO? (S) FACTOR
L7          145 S SMAD (S) COACTIVAT?
L8           74 S SMAD (S) COACTIVAT? (S) P300
L9           29 DUP REM L8 (45 DUPLICATES REMOVED)
L10           0 S (SMAD (S) COACTIVAT?) (P) SCREEN?
L11          11 S (SMAD (S) COACTIVAT?) (P) ASSAY?
L12           4 DUP REM L11 (7 DUPLICATES REMOVED)
L13          52 S SMAD (S) COACTIVAT? (S) CBP
L14          19 DUP REM L13 (33 DUPLICATES REMOVED)
L15          46 S SMAD (S) YEAST (S) TWO
L16          21 DUP REM L15 (25 DUPLICATES REMOVED)
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